

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0012886, 0013163, 0013594, & **OFFICE** Design Policy & Support
752210-
STP00-9335-00(003)
Rockdale County
GDOT District 7 - Metro Atlanta **DATE** 12/29/2015
Sigman Rd Widening from East of Lester Road to
Dogwood Connector, Including Shared Use Path

FROM  Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Hiral Patel, Director of Engineering/State Environmental Administrator
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Darryl VanMeter, State Innovative Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Bill DuVall, State Bridge Engineer
Andrew Heath, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Lee Upkins, State Utilities Engineer
Paul Tanner, State Transportation Data Administrator
Attn: Systems & Classification Branch
Richard Cobb, Statewide Location Bureau Chief
Ed David Adams, State Safety Program Manager
Kathy Zahul, District Engineer
Scott Lee, District Preconstruction Engineer
Nicholas Fields, District Utilities Engineer
Xavier James, Project Manager
BOARD MEMBER - 4th Congressional District

STATE OF GEORGIA
PROJECT CONCEPT REPORT

Project Type: <u>Reconst./Widening</u>	P.I. Numbers: <u>0013163, 0013594</u> <u>752210 & 0012886</u>
GDOT District: <u>7</u>	County: <u>Rockdale</u>
Federal Route Number: <u>N/A</u>	State Route Number: <u>20 & 138</u>

Sigman Road widening from east of Lester Road to Dogwood Connector

Submitted for approval:

<u>Moreland Altobelli Associates, Inc.</u>	<u>10/20/15</u> Date
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<u>Maginal Valentine</u>	<u>10/20/15</u> Date
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<u>Rockdale County</u>	<u>10/30/15</u> Date
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<u>Albert Shelby</u>	<u>10/30/15</u> Date
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<u>State Program Delivery Engineer</u>	<u>10/22/15</u> Date
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<u>GDOT Project Manager</u>	<u>10/22/15</u> Date
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<u>Recommendation for approval:</u>	<u>11/30/15</u> Date
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* <u>Hiral Patel / KLP</u>	<u>11/30/15</u> Date
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* <u>Ken Werho / KLP</u>	<u>11/5/15</u> Date
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* <u>State Traffic Engineer</u>	<u>11/5/15</u> Date
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* <u>Lisa Myers / KLP</u>	<u>11/3/15</u> Date
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* <u>Project Review Engineer</u>	<u>11/13/15</u> Date
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* <u>Yulonda Pride-Foster / KLP</u>	<u>11/13/15</u> Date
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* <u>State Utilities Engineer</u>	<u>11/13/15</u> Date
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* <u>District Engineer</u>	<u>11/29/15</u> Date
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* <u>Bill DuVall / KLP</u>	<u>11/29/15</u> Date
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* <u>State Bridge Engineer</u>	<u>11/29/15</u> Date
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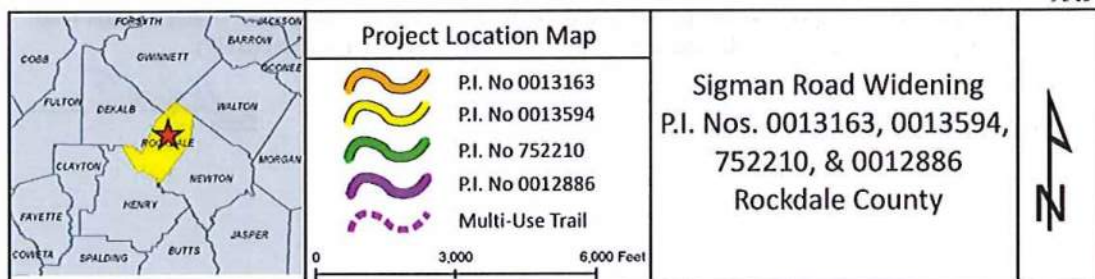
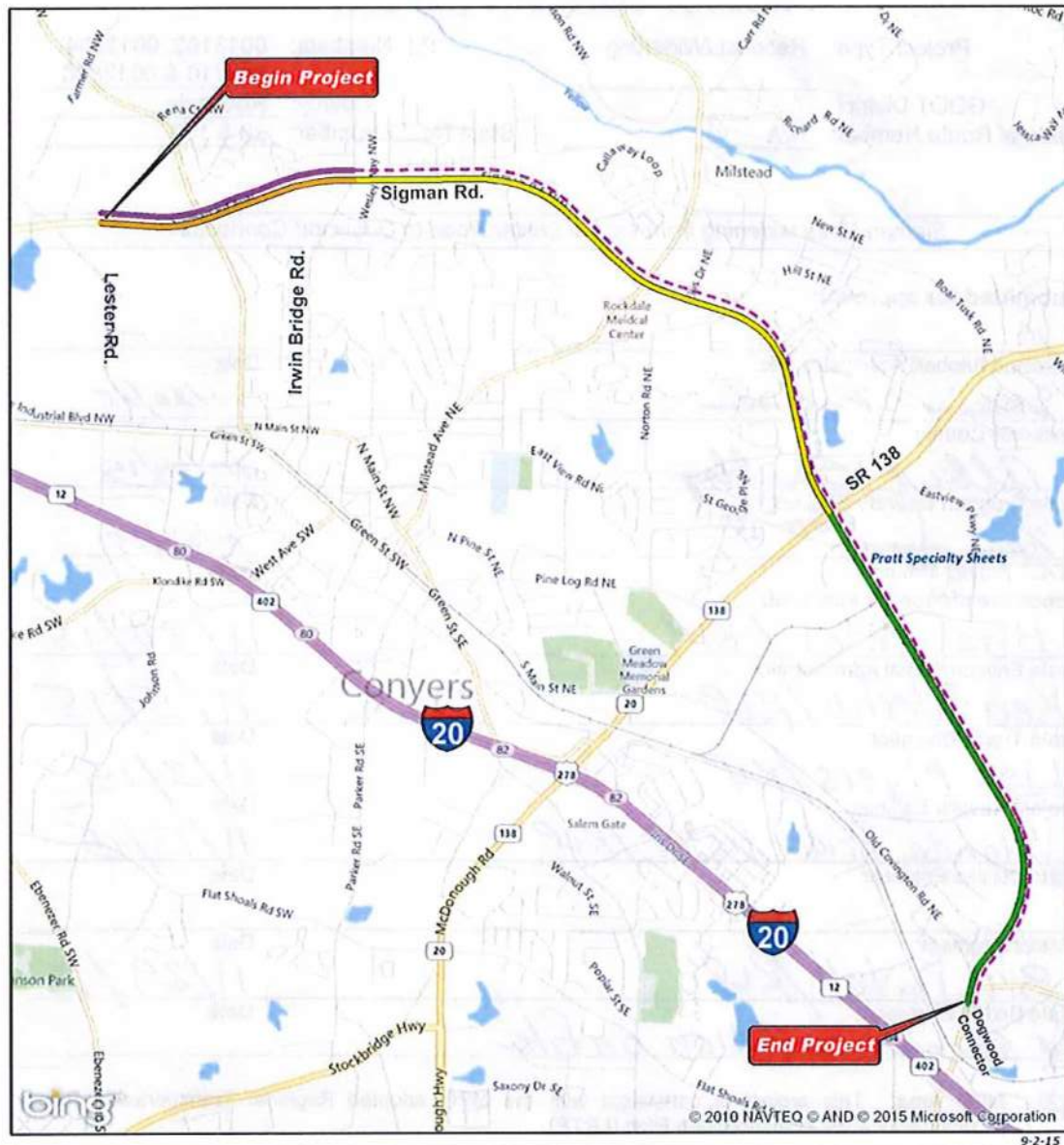
* <u>Recommendation on file</u>	<u>11-6-15</u> Date
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☒ MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).

☐ Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

<u>State Transportation Planning Administrator</u>	<u>11-6-15</u> Date
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PROJECT LOCATION MAP



PLANNING AND BACKGROUND

Project Justification Statement: This project was initiated by the local government of Rockdale County. It is a two-to-four lane widening project intended to add capacity, increase mobility, and reduce potential for crashes on Sigman Road. A section of Sigman Road has already been widened to four lanes with a raised median from I-20 on the west side of Conyers to east of Lester Road. Also, Sigman Road through the intersection of SR 20 (Loganville Highway) is four-lanes. The project would result in a uniform typical section for Sigman Road throughout its length along the developed area north of I-20 to Dogwood Connector.

Sigman Road has conflicts between fast-moving peak-hour through traffic and local traffic attempting to access driveways and cross-streets, resulting in extreme delays and frequent traffic crashes. The proposed project would provide relief for this congestion and operational problems caused by the heavy traffic volumes associated with adjacent existing and expanding residential and commercial development.

Current traffic volumes range from 13,080 to 15,940 vehicles per day (vpd) and are projected to increase to 24,480 to 40,880 vpd by the design year 2045. Without improvement, five key intersections would be operating at capacity or failing Levels of Service (LOS E or F) under future 2045 no-build conditions. Widening of Sigman Road would improve the 2045 design year LOS at all intersections to an acceptable LOS D or better.

A reduction in traffic congestion and improvement of traffic operational movements at both signalized and unsignalized intersections would also in turn reduce the frequency and severity of crashes on Sigman Road. Crash and injury rates on sections of Sigman Road for years 2010, 2011 and 2012 are higher than the statewide averages for urban principal arterials similar to Sigman Road. An average of 58% of the crashes on Sigman Road are rear-end collisions. Rear-end collisions are an indicator of traffic congestion.

The project would also add context sensitive design improvements in the form of a multi-use path and a grassed median with potential for landscaping. The median would also serve to improve the safety and efficiency of the roadway by limiting left-turn movements and controlling access points.

The project limits for Sigman Road widening would begin 650 feet east of Lester Road, which is the end of a four-lane divided section and extend to Dogwood Connector. Dogwood Connector would be a logical terminus for the project. Sigman Road beyond Dogwood Connector is already four-lanes divided with an interchange at I-20 and would complete a four-lane northern loop around the City of Conyers. Because of funding constraints, the Sigman Road widening project is being funded under three P.I. Numbers: 0013163 - Sigman Road from 650 east of Lester Road to Irwin Bridge Road; 0013594 – Sigman Road from Irwin Bridge Road to SR 138; and, 752210 – Sigman Road from SR 138 to Dogwood Connector.

Rockdale County and the City of Conyers have plans to connect a multi-use trail around various parts of the city to provide greater east-west connectivity through the county and points beyond. Therefore, the widening projects (P.I. Nos. 0013163, 0013594 and 752210) will include a multi-use trail on the

County: Rockdale

north side of Sigman Road which would expand the existing multi-use trail system. P.I. No. 0012886 includes the funding for the multi-use trail from east of Lester Road to Irwin Bridge Road.

Existing conditions: Sigman Road has a posted speed limit of 45 miles per hour (mph), no paved shoulders, and has left turns and right-turn lanes at some of the major signalized intersections. Also, two through lane exists on Sigman Road in each direction through the intersection of SR 20 (Loganville Highway). Sigman Road serves as the most direct east-west facility for local and commercial traffic to access I-20. Sigman Road also serves as a major collection point for smaller east-west collector roadways that provide access into and out of City of Conyers, including Rockbridge Road, Irwin Bridge Road (CR 442), Loganville Highway, Milstead Road, Eastview Road and SR 138. Sigman Road is an urban principal arterial and has land uses that include Conyers Middle School, Rockdale Medical Center and hospital, a recreational complex with baseball fields, several churches, a church cemetery, residential subdivisions, shopping centers and industrial businesses.

There are several existing box culverts along this section of Sigman Road, but no bridges or significant retaining walls. Major utilities in the area include an underground gas or petroleum pipeline on easement crossing Sigman Road southeast of SR 138, and a power line easement that crosses Sigman Road 200' east of Rockbridge Road.

Other projects in the area: There are nine major transportation infrastructure projects programmed in the study area and contained within the Atlanta Regional Commission's (ARC's) TIP or RTP. They are described below.

1. STP00-9336-00(001), P.I. No. 752270: Old Covington Highway from Green Street to SR 138/20 (Walnut Grove Road). The proposed project would widen the roadway from 2 lanes to 4 lanes. Engineering was authorized in fiscal year 2004 and right-of-way acquisition in 2007 and 2011. Construction is programmed for fiscal year 2014. The ARC TIP reference number is RO-034.
2. P.I. No. 721582: Salem Road Connector (Old Salem Road Realignment) Relocate intersection from the vicinity of SR 20/138 to south of I-20. Engineering was authorized in fiscal year 2006 and 2011. Right-of-way acquisition is programmed in 2018. Construction is programmed in fiscal year 2019. The ARC TIP reference number is RO-138C.
3. CSSTP-0006-00(935), P.I. No. 0006935: SR 20 (Loganville Highway) at West Hightower Trail & Chandler Road. The proposed project would be an intersection improvement project. Engineering was authorized in fiscal year 2006 and 2011. Right-of-way acquisition is programmed in 2017 and construction is programmed in 2019. The ARC TIP reference number is RO-242C.
4. P.I. No. 0011640: Hardin/O'Kelly Street Bicycle and Pedestrian Improvements from Dogwood Drive to Green Street. Engineering was authorized in fiscal year 2013. Right-of-way acquisition is programmed in 2015 and construction in 2017. The ARC TIP reference number is RO-248.
5. NH000-0035-01(033), P.I. No. 731048: I-20 East Interchange Improvements at SR 138/20 (Walnut Grove Road/McDonough Highway). This project would include bridge and road widening from 4 to 6 lanes and ramp improvements. Engineering is programmed in fiscal year 2015. Right-of-way acquisition is programmed in 2018 and construction are programmed in long range (2020-2030). The ARC TIP reference number is RO-AR-138.
6. P.I. No. 0006934: Commerce Crossing/I-20 Overpass from Old Salem Road to Old Covington Highway. The project is approximately 0.4 mile in length. The project is programmed in long range (2020-2030). The ARC RTP reference number is RO-243.

County: Rockdale

7. Millers Chapel Road Widening from SR 138 to SR 20. This project would widen the roadway from 2 lanes to 4 lanes. The project length is approximately 0.6 mile. The project is programmed in long range (2020-2030). The ARC RTP reference number is RO-015F.
8. CSSTP-0006-00(931), P.I. No. 0006931: Sigman Road Extension/Hayden Quarry Road from DeKalb County Line to I-20 at Sigman Road. This project is approximately 0.9 mile in length. The project is programmed in long range (2031-2040). The ARC RTP reference number is RO-235A.
9. P.I. No. 0007869: SR 20 (Loganville Highway) from Sigman Road to Pleasant Hill Road. The proposed project would widen the roadway from 2 lanes to 4 lanes. The project length is approximately 7.1 miles. The project is programmed in long range (2031-2040). The ARC RTP reference number is RO-242A.

MPO: Atlanta TMA

TIP #: RO-235C, RO-235D, RO-235E & RO-256

TIA Regional Commission: Not a TIA ProjectCongressional District(s): 4Federal Oversight: ☐ FOS/PoDI ☒ Exempt ☐ State Funded ☐ OtherProjected Traffic: ADTP.I. No. 0013163 & 0012886

Current Year (2014): 13080 Open Year (2025): 18360 Design Year (2045): 28780

P.I. No. 0013594

Current Year (2014): 19820 Open Year (2025): 26100 Design Year (2045): 40880

P.I. No. 752210

Current Year (2014): 15940 Open Year (2025): 21960 Design Year (2045): 24480

Traffic Projections Performed by: *Moreland Altobelli Associates, Inc.*

Functional Classification (Mainline): Urban Principal Arterial

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:

Warrants met: ☐ None ☒ Bicycle ☒ Pedestrian ☒ Transit

Georgia Regional Transportation Authority (GRTA) operates Express Bus Route 425 on Sigman Road from East Park Drive to SR 138. This route travels on SR 138 to and from I-20.

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? ☒ No ☐ Yes

Pavement Evaluation and Recommendations

Initial Pavement Evaluation Summary Report Required? ☐ No ☒ YesInitial Pavement Type Selection Report Required? ☐ No ☒ YesFeasible Pavement Alternatives: ☒ HMA ☐ PCC ☐ HMA & PCC

County: Rockdale

DESIGN AND STRUCTURAL

Description of the proposed project: This project, located in central Rockdale County and partially within the City of Conyers, would widen and improve approximately 6.26 miles of Sigman Road from just east of Lester Road to Dogwood Connector. The project is proposed to be constructed under four project numbers.

- P.I. No. 0013163 – Sigman Rd. from 650 feet east of Lester Rd. to Irwin Bridge Road (1.3 miles)
- P.I. No. 0013594 – Sigman Rd. from Irwin Bridge Rd. to 970 feet east of SR 138 (2.9 miles)
- P.I. No. 752210 – Sigman Road from 300 feet east of SR 138 to Dogwood Connector (2.3 miles)
- P.I. No. 0012886 – Multi-use trail funding from 650 feet east of Lester Road to Irwin Bridge Road

Sigman Rd. would be widened from two-lanes to four 12'-lanes separated by a 20' raised median. The shoulders would be upgraded to urban-type with curb and gutter. The left shoulder would be widened to 18' with a 10' multi-use path and the right shoulder would be widened to 12' with a standard 5' sidewalk.

Major Structures: There are a number of box culverts on Sigman Road as listed in the table below, but there are no bridges. Proposed retaining walls to reduce environmental impacts are shown in the table on Page 7.

Structure	Existing	Proposed
6' x 6' RCBC	- Located 250' west of Rockbridge Rd. - Length = 97'	At this time, the existing culverts have not been evaluated to determine if they need to be reconstructed entirely or just lengthened. As design progresses, each culvert will be evaluated based on its capacity to handle anticipated flows and the physical condition of the structure itself. It is anticipated that all CMP's beneath the roadway will be replaced with RCP's or RCBC's.
4' x 6' RCBC	- Located 900' northeast of Rockbridge Rd. - Length = 102'	
5' x 5' RCBC	- Located 3200' east of Irwin Bridge Rd. - Length = 107'	
66" CMP	- Located 2600' northwest of Loganville Hwy - Length = 140'	
6' x 8' DBL RCBC	- Located 2000' north of Eastview Rd. - Length = 93'	
60" CMP	- Located 400' south of Eastview Rd. - Length = 284'	
4' x 6' RCBC	- Located 1500' southeast of SR 138 - Length = 96'	
66" RCP	- Located 2500' northwest of Gees Mill Rd. - Length = 122'	
60" RCP	- Located 1850' northwest of Gees Mill Rd. - Length = 76'	
72" RCP	- Located 1500' northwest of Gees Mill Rd. - Length = 114'	
60" RCP	- Located 2000' north of Old Covington Hwy. - Length = 542'	
72" RCP	- Located 1400' north of Old Covington Hwy. - Length = 113'	

County: Rockdale

Wall No.	Structure Type	Length	Wall Location Distance from Nearest Street	Right or Left
1	P-Wall Type 3 (10-14' Ht)	113	822' WEST OF ROCKBRIDGE RD	Left
2	P-Wall Type 3 (10-14' Ht)	147	274' WEST OF ROCKBRIDGE RD	Left
3	MSE Wall (10-20' Ht)	97	796' EAST OF ROCKBRIDGE RD	Right
	MSE Wall (20-30' Ht)	137		
4	MSE Wall (10-20' Ht)	135	720' EAST STEPPING STONE LANE	Left
5	P-Wall Type 3 (10-14' Ht)	197	850' WEST OF IRWIN BRIDGE RD	Right
	MSE Wall (10-20' Ht)	63		
6	P-Wall Type 2 (6-10' Ht)	150	30' EAST OF ROCKY RIDGE DR	Right
7	P-Wall Type 2 (6-10' Ht)	400	388' WEST OF OLD CAMP TRAIL	Right
8	MSE Wall (10-20' Ht)	114	205' WEST OF SIGMAN DR	Left
9	MSE Wall (20-30' Ht)	125	830' WEST OF CALLAWAY CROSSING DR	Left
10	MSE Wall (20-30' Ht)	125	800' WEST OF CALLAWAY CROSSING DR	Right
11	P-Wall Type 3 (10-14' Ht)	180	292' EAST OF RENAISSANCE DR	Right
12	MSE Wall (10-20' Ht)	120	390' EAST OF RENAISSANCE DR	Left
13	MSE Wall (20-30' Ht)	108	1300' NORTH OF PARK DRIVE	Left
14	P-Wall Type 3 (10-14' Ht)	96	1287' NORTH OF SARASOTA BUS. PKWY	Right
15	P-Wall Type 2 (6-10' Ht)	225	1700' SOUTH OF PARK DR	Left
16	P-Wall Type 3 (10-14' Ht)	324	70' SOUTH OF SARASOTA BUS. PKWY	Right
17	MSE Wall (10-20' Ht)	145	2260' SOUTH OF SARASOTA BUS. PKWY	Right
	Concrete Side Barrier Type 6-SC (8'-6" to 10'-6" Ht)	137		
	Concrete Side Barrier Type 6-SB (6'-6" to 8'-6" Ht)	220		
18	MSE Wall (20-30' Ht)	113	2350' SOUTH OF PARK DR.	Left
19	P-Wall Type 3 (10-14' Ht)	105	1900' NORTH OF GEES MILL RD	Right
20	P-Wall Type 3 (10-14' Ht)	63	1825' NORTH FROM GEES MILL RD	Left
	P-Wall Type 2 (6-10' Ht)	265		
21	P-1	93	1450' NORTH FROM GEES MILL RD	Right
	P-Wall Type 2 (6-10' Ht)	80		
	P-Wall Type 3 (10-14' Ht)	102		
22	P-Wall Type 2 (6-10' Ht)	304	730' NORTH FROM GEES MILL RD	Right
23	MSE (10-20)	100	1825' NORTH FROM GEES MILL RD	Left
24	P-Wall Type 3 (10-14' Ht)	89	130' SOUTH FROM GEES MILL RD	Left
25	P-Wall Type 1 (0-6' Ht)	72	530' SOUTH FROM GEES MILL BUSINESS RD	Right
26	MSE Wall (20-30' Ht)	126	580' SOUTH FROM GEES MILL BUSINESS RD	Left
27	MSE Wall (10-20' Ht)	145	1440' NORTH FROM OLD CONVINGTON RD	Left

County: Rockdale

Mainline Design Features: Sigman Rd. (CR 435 / SR 20) / Urban Principal Arterial

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2	4	4
- Lane Width(s)	12'	11' min. 12' desirable	12'
- Median Width & Type	none	20' raised (min.) 24' raised (desirable)	20' raised*
- Outside Shoulder or Border Area Width	varies	10' min. 16' desirable	18' Lt. / 12' Rt.
- Outside Shoulder Slope	varies	2%	2%
- Inside Shoulder Width	N/A	N/A	N/A
- Sidewalks	none	5' min.	10' multi-use Lt. / 5' Rt.
- Auxiliary Lanes	12'	N/A	11' min.
- Bike Lanes	none	4' min.	Yes – 10' multi-use path
Posted Speed	45 mph		45 mph
Design Speed	N/A	45 mph	45 mph
Min Horizontal Curve Radius	1000'	711'	1000'
Maximum Superelevation Rate	unknown at this time	4% (max. allowed)	3.8% (max. proposed)
Maximum Grade	6.5% max.	7% (max. allowed)	6.5% max.
Access Control	by permit	by permit	by permit
Design Vehicle	N/A	WB-67	WB-67
Pavement Type	HMA	N/A	HMA

*The minimum median width will be used for this project to reduce the environmental and right-of-way impacts.

Major Interchanges/Intersections: Major intersections along this project include: Rockbridge Road, Stepping Stone Lane, Irwin Bridge Road, Old Camp Trail, Sigman East Drive, Callaway Crossing, Conyers Middle School, SR 20 (Loganville Hwy)/Milstead Avenue, Milstead Road, Renaissance Drive, Eastview Road, SR 138, Saratoga Business Pkwy/E. Park Drive, Gees Mill Road, Gees Mill Business Pkwy, Old Covington Road, Dogwood Connector. Median openings are proposed at these intersections.

Lighting required: ☐ No ☒ Yes

Rockdale County DOT has expressed interest in lighting this corridor. Roadway lighting is included in the construction cost estimate.

Off-site Detours Anticipated: ☒ No ☐ Undetermined ☐ Yes

Transportation Management Plan [TMP] Required: ☐ No ☒ Yes

If Yes: Project classified as:

☒ Non-Significant ☐ Significant

TMP Components Anticipated: ☒ TTC ☐ TO ☐ PI

County: Rockdale

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

FHWA/AASHTO Controlling Criteria	No	Undeter- mined	Yes	Appvl Date (if applicable)
1. Design Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Lane Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Shoulder Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Bridge Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Horizontal Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Superelevation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Vertical Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Grade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Stopping Sight Distance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Cross Slope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Vertical Clearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Lateral Offset to Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Bridge Structural Capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Design Variances to GDOT Standard Criteria anticipated:

GDOT Standard Criteria	Reviewing Office	No	Undeter- mined	Yes	Appvl Date (if applicable)
1. Access Control/Median Openings	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Intersection Sight Distance	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Intersection Skew Angle	DP&S	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. Lateral Offset to Obstruction	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Rumble Strips	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Safety Edge	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Median Usage	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Roundabout Illumination Levels	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Complete Streets	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. ADA & PROWAG	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. GDOT Construction Standards	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. GDOT Drainage Manual	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. GDOT Bridge & Structural Manual	Bridges	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Intersection Skew Angle: One side of Irwin Bridge Road has an existing skew angle of approximately 61 degrees and may require a design variance. The need for the variance will be thoroughly evaluated. This skew angle will be corrected if feasible from a cost and right-of-way impact perspective.

VE Study anticipated: ☐ No ☒ Yes ☐ Completed – Date:

UTILITY AND PROPERTY

Temporary State Route needed: ☒ No ☐ Yes ☐ Undetermined

Railroad Involvement: There are no railroads located within the project limits so no coordination will be necessary.

County: Rockdale

- Atlanta Gas Light
- AT&T
- Comcast Communications
- Georgia Power
- Rockdale County Water
- Rockdale County Sewer
- Snapping Shoals EMC
- Williams/Transcontinental pipeline

There is an existing aerial pole line extending the length of the project along Sigman Road. It connects with a substation located just northwest of the intersection with Gees Mill Road beyond the project limits. There is one power line easement which crosses Sigman Road 200' east of Rockbridge Road. This facility is presumably owned by Georgia Power.

SUE Required: ☐ No ☒ Yes ☐ Undetermined

At this time, it is anticipated that a SUE process will occur to locate all utilities at a quality level (QL) B. Depending on the nature of the conflict, QL-A may be necessary in some instances.

Public Interest Determination Policy and Procedure recommended? ☒ No ☐ Yes

Right-of-Way (ROW): Existing width: 80-100 ft Proposed width: 100-136 ft

Required Right-of-Way anticipated: ☐ None ☒ Yes ☐ Undetermined

Easements anticipated: ☐ None ☒ Temporary ☒ Permanent ☐ Utility ☐ Other

P.I. Number		0013163	0012886	0013594	752210	Total
Anticipated total number of impacted parcels:		9	11	54	35	109
Displacements anticipated:	Businesses:	0	0	0	0	0
	Residences:	0	0	2*	0	2*
	Other:	0	0	0	0	0
Total Displacements:		0	0	2*	0	2*

*The 2 houses at the intersection with Old Camp Trail have the highest potential to be displacements because of the steep grade on Old Camp Trail and because Sigman Road has been shifted to that side to avoid a stream, but additional survey and design work would be necessary before making a final determination as to whether the homes must be displaced. Efforts will be made to avoid the displacements by constructing retaining walls and/or raising the roadway grade.

Location and Design approval: ☐ Not Required ☒ Required

Impacts to USACE property anticipated? ☒ No ☐ Yes ☐ Undetermined

County: Rockdale

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern: There are no context sensitive issues or concerns identified within the corridor.

Context Sensitive Solutions Proposed: This project is a collaborative effort between business and community leaders. Although there are not any specific context sensitive issues identified, the design will provide sidewalks and a multi-use path along Sigman Road within the project limits. These facilities will provide a context sensitive feature to the environment.

ENVIRONMENTAL & PERMITS

Anticipated Environmental Document:

GEPA: ☐ NEPA: ☐ CE ☒ EA/FONSI ☐ EIS

MS4 Permit Compliance – Is the project located in a MS4 area? ☐ No ☒ Yes

A concept-level MS4 Hydrology Study is included in the attachments to this report.

Environmental Permits/Variances/Commitments/Coordination anticipated:

Permit/Variance/Commitment/Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Forest Service/Corps Land	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. CWA Section 404 Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	RP96
4. 33 USC 408 Decision	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. Tennessee Valley Authority Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6. Buffer Variance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Specifics Unknown
7. Coastal Zone Management Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. NPDES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. FEMA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10. Cemetery Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Other Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. Other Commitments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Is a PAR required? ☒ No ☐ Yes ☐ Completed – Date:

Environmental Comments and Information:

NEPA/GEPA: An Environmental Assessment (EA) will be prepared to reflect the current economic, environmental, cultural and social affects. All special studies will be conducted and completed in accordance with current GDOT standards.

There are streams and wetlands along the project corridor that would have to be addressed. These resources were identified during the ecology field work and the proposed roadway alignment has been shifted and retaining wall locations identified to avoid and minimize impacts to these resources.

Ecology: Detailed field work was performed to identify streams and wetlands. Coordination with the Department of Natural Resources was completed in order to identify potential presence of protected species and/or habitats and any seasonal survey requirements.

History: A No Historic Resources Survey Report was completed for this project.

County: Rockdale

Archeology: An archaeological field survey was conducted and a short form of negative findings was completed.

Air Quality:

Is the project located in a PM 2.5 Non-attainment area? ☐ No ☒ Yes
 Is the project located in an Ozone Non-attainment area? ☐ No ☒ Yes
 Is a Carbon Monoxide hotspot analysis required? ☐ No ☒ Yes

The FY 2014-2019 Transportation Improvement Program (TIP) under the PLAN 2040 Regional Transportation Plan (RTP) is the current adopted plan for the Atlanta area showing the region's highest transportation priorities. It was adopted by the Atlanta Regional Commission (ARC) Board on March 26, 2014 with GRTA Board action on April 9, 2014. ARC received a conformity determination from the US DOT on April 30, 2014.

TIP Reference	Sigman Road	P.I. Number	Funding
RO-235C	East of Lester Road to Irwin Bridge Road	0013163	PE (Local) FY2015 ROW FY2017 CST FY2018
RO-256	Multi-use trail East of Lester Road to Irwin Bridge Road	0012886	PE (Local) FY2015 ROW FY2017 CST FY2018
RO-235D	Irwin Bridge Road to SR 138	0013594	PE(Local) FY2019 ROW & CST Long Range
RO-235E	SR 138 to Dogwood Connector	752210	PE (Local) FY2019 ROW & CST Long Range

(See TIP sheets in Attachment #11.)

Air Quality Impact Assessment was conducted according to the latest GDOT policy effective December 20, 2012. CO, Ozone, PM 2.5, and MSATs were evaluated as part of this assessment. This project is consistent with the State Implementation Plan for the attainment of clean air quality in Georgia and would be in compliance with both state and federal air quality standards.

Noise Effects: Noise Impact Assessment was conducted using TNM in compliance with 23 USC Section 109(h) and (i) and according to the new GDOT Noise Abatement policy, effective July 13, 2011.

Public Involvement: A Public Information Open House (PIOH) is tentatively scheduled for the second week of October.

Major stakeholders: The following is a list of stakeholders that have been identified thus far: Rockdale County, City of Conyers, Conyers-Rockdale Chamber of Commerce, Rockdale Hospital, Conyers Middle School, Rockdale County Sheriff's Office, Rockdale County Fire Department, City of Conyers Police Department and traveling public.

County: Rockdale

CONSTRUCTION

Issues potentially affecting constructability/construction schedule:

Detours are not anticipated for stage construction. However there are 12 major box culverts that will be analyzed hydrologically during the preliminary design process to verify that they have sufficient capacity. If any of the major box culverts need to be replaced then detours are required at which time we will pursue public involvement.

In addition, there is an aerial power pole line running the length of the project requiring relocation that will further complicate the staging efforts.

Early Completion Incentives recommended for consideration: ☒ No ☐ Yes
Early Completion Incentives are not anticipated at this time.

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Initial Concept Meeting: May 6, 2015, see attached minutes.

Concept Meeting: September 3, 2015, see attached minutes.

Other coordination to date: Two meetings have been held with Rockdale County to discuss the concept. The meetings took place on August 23, 2012 and August 28, 2013. The minutes of these meetings are included in the attachments of this report.

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Rockdale County
Design	Rockdale County
Right-of-Way Acquisition	Rockdale County
Utility Coordination (Preconstruction)	Rockdale County
Utility Relocation (Construction)	Rockdale County, Utility Owners
Letting to Contract	Rockdale County
Construction Supervision	Rockdale County
Providing Material Pits	Contractor
Providing Detours	Contractor
Environmental Studies, Documents, & Permits	Rockdale County
Environmental Mitigation	Rockdale County
Construction Inspection & Materials Testing	Rockdale County

County: Rockdale

Project Cost Estimate Summary and Funding Responsibilities:

	Breakdown of PE***	ROW	Utility*	CST**	Mitigation	Total Cost
Funded By	Rockdale / GDOT	Rockdale	Rockdale	GDOT / Rockdale	GDOT	
Total \$ Amount	\$1,876,500	\$7,909,000	\$11,795,539	\$50,487,521.68	\$150,000	\$72,087,560.68
P.I. No.0013163	\$564,000	\$595,000	\$1,954,458	\$8,636,939.79	\$18,500	\$11,768,897.79
P.I. No. 0012886	\$312,000	\$369,000	\$0	\$2,059,538.83	\$11,500	\$2,752,538.83
P.I. No.0013594	\$500,000	\$4,020,000	\$3,890,714	\$20,932,915.05	\$63,000	\$29,406,629.05
P.I. No.752210	\$500,000	\$2,794,000	\$5,950,367	\$18,858,128.01	\$57,000	\$28,159,495.01
Date of Estimate	10/22/2015	10/15/2015	10/21/2015	10/21/2015	8/19/2014	

*Reimbursable Utility Costs only

**CST Cost includes: Construction, Engineering and Inspection, and Liquid AC Cost Adjustment.

***PE cost of P.I. No. 0013163 is the contracted amount. PE cost of P.I. Nos. 012886, 0013594 & 752210 are the amounts shown in the current ARC TIP.

ALTERNATIVES DISCUSSION

Alternative selection: Three alternatives were studied along the Sigman Road corridor from east of Lester Road to Dogwood Connector. Below are descriptions of the alternatives that were evaluated.

No-Build Alternative: No widening or improvements to Sigman Road would occur under this alternative.			
Estimated Property Impacts:	0	Estimated Total Cost:	\$0
Estimated ROW Cost:	\$0	Estimated CST Time:	N/A
Rationale: The No-Build Alternative was not selected because it does not meet the need and purpose of the project to relieve traffic congestion and reduce crash potential along the corridor.			
Alternative 1: Alternative 1 consists of symmetric widening of the existing roadway such that the proposed roadway centerline matches the location of the existing centerline.			
Estimated Property Impacts:		Estimated Total Cost:	
Estimated ROW Cost:		Estimated CST Time:	24 months
Rationale: This alternative was not selected due to its significant impacts to environmental resources, particularly streams and wetlands which would require an Individual 404 permit and the PAR process at the cost of additional time and expense. Additionally, right-of-way and utilities would be further impacted by this alternative. Therefore, the cost of both right-of-way and utility relocation would be higher than Alternative 2.			
Alternative 2: Alternative 2 (Preferred Alternative) consists of asymmetric widening of the existing roadway. Under this alternative, the proposed roadway alignment is independent of the existing road.			
Estimated Property Impacts:	109	Estimated Total Cost:	\$72,087,560.68
Estimated ROW Cost:	\$7,909,000	Estimated CST Time:	24 months
Rationale: This alternative is preferred due to its avoidance and minimization of stream and wetland impacts. The asymmetric widening allows the roadway alignment more flexibility to avoid environmental resources. Although the construction cost is slightly higher due to the increased number of retaining walls, the reduced schedule time and associated engineering costs justifies the selection of this alternative as the Preferred Concept.			


County: Rockdale


Comments: None.

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Concept Layout
2. Typical sections
3. Detailed Cost Estimates:
 - a. Construction including Engineering and Inspection
 - b. Completed Liquid AC Cost Adjustment forms
 - c. Right-of-Way
 - d. Utilities
 - e. Environmental Mitigation
4. Crash summaries
5. Traffic diagrams
6. Capacity analysis summary
7. Concept Level Hydrology Study for MS4 Permit
8. Pavement studies
9. Conforming plan's network schematics showing thru lanes.
10. Minutes of Concept meetings
11. ARC TIP Sheets

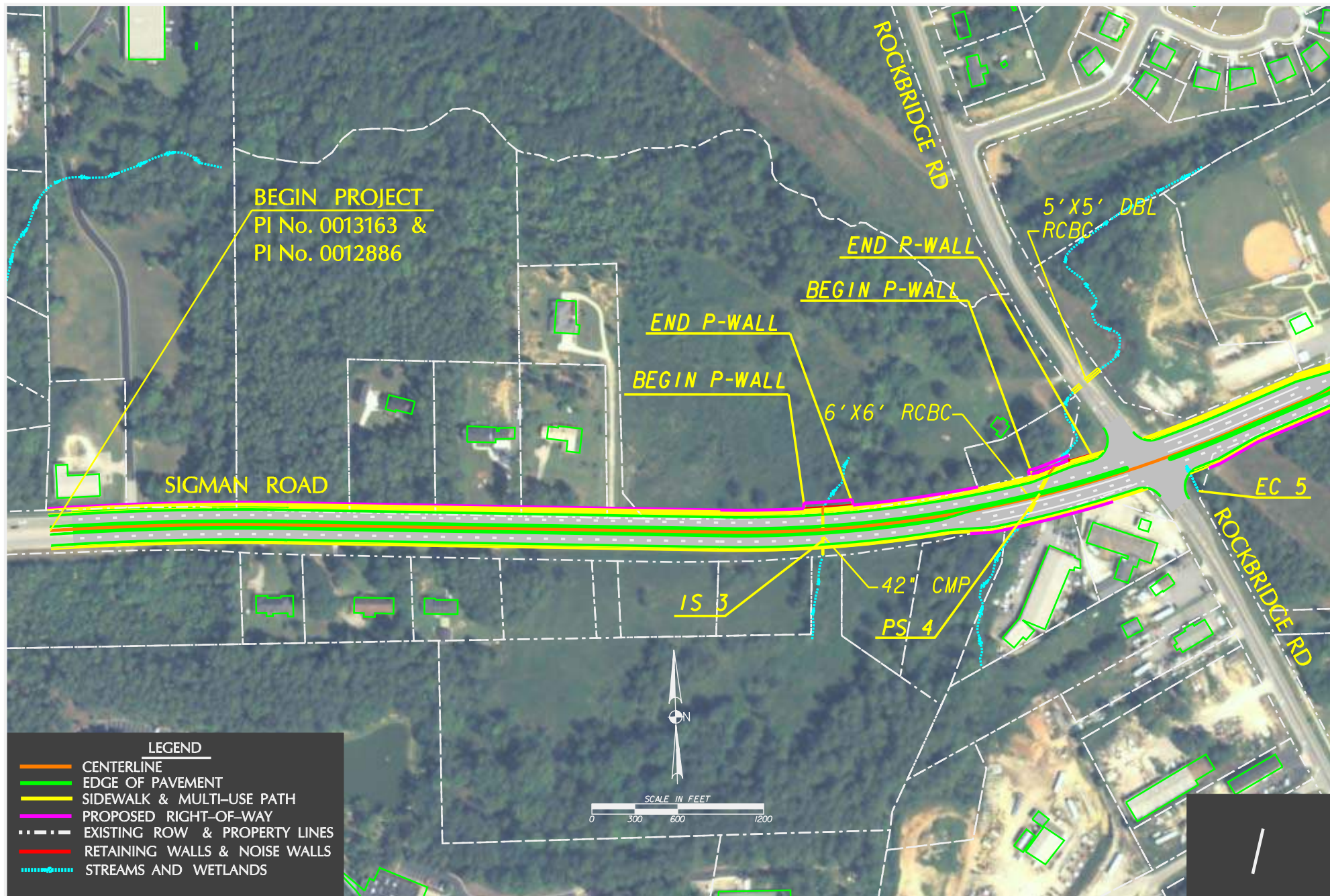
APPROVALS

Concur: 
Director of Engineering

Approve:  12.18.15
Chief Engineer Date

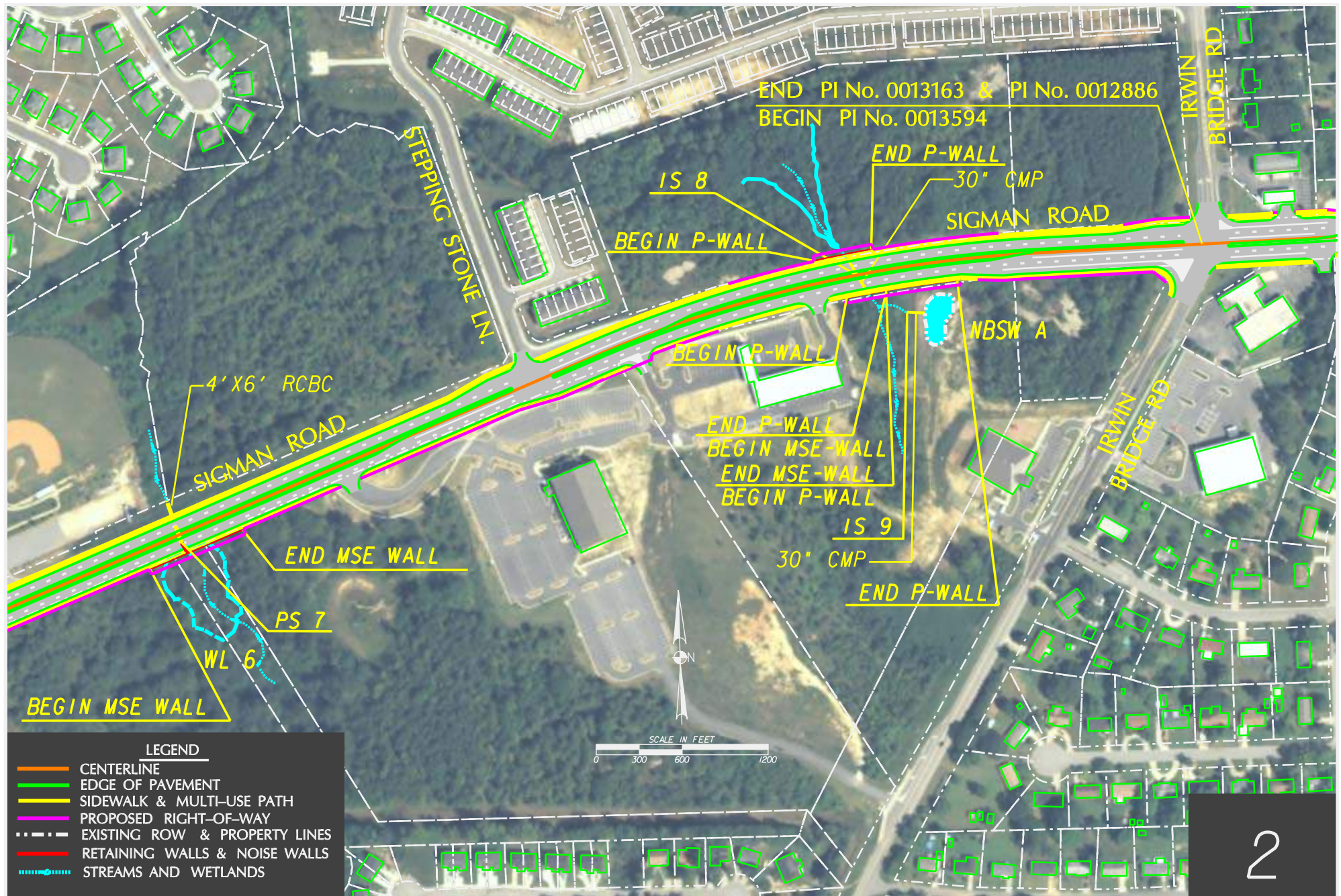
Attachment 1

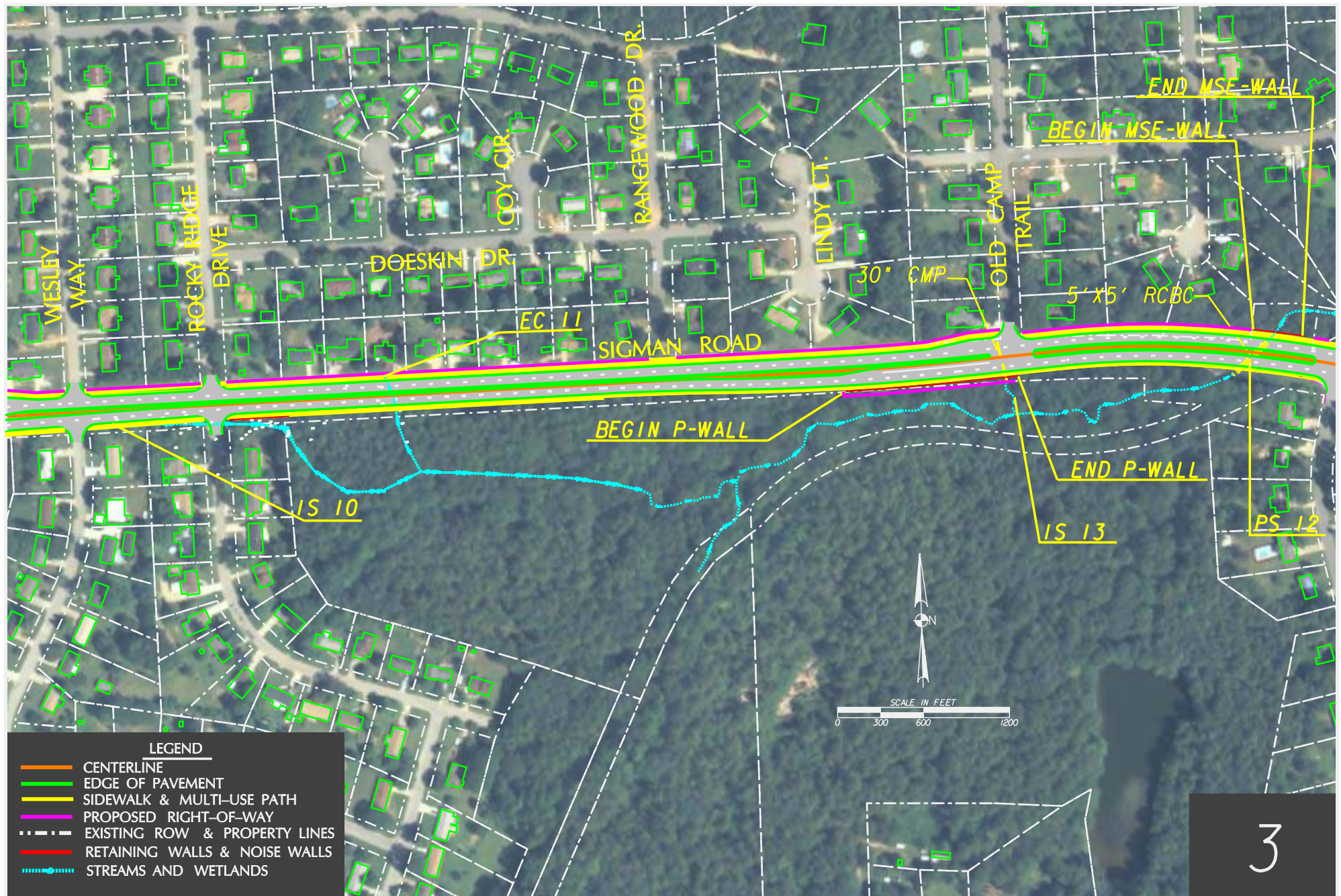
Concept Layout



LEGEND

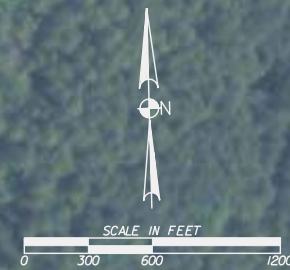
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- EDGE OF PAVEMENT
- SIDEWALK & MULTI-USE PATH
- PROPOSED RIGHT-OF-WAY
- EXISTING ROW & PROPERTY LINES
- RETAINING WALLS & NOISE WALLS
- STREAMS AND WETLANDS



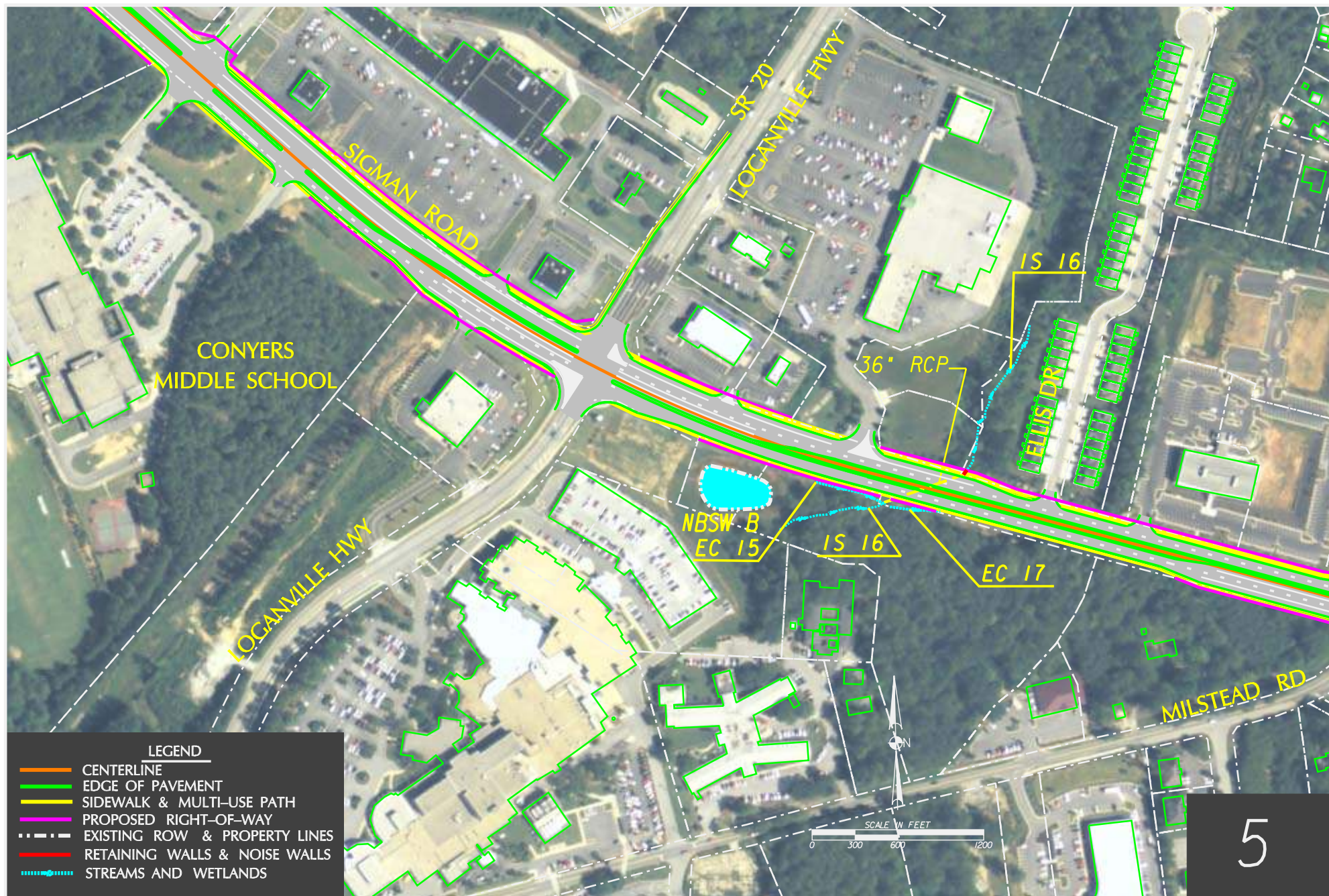


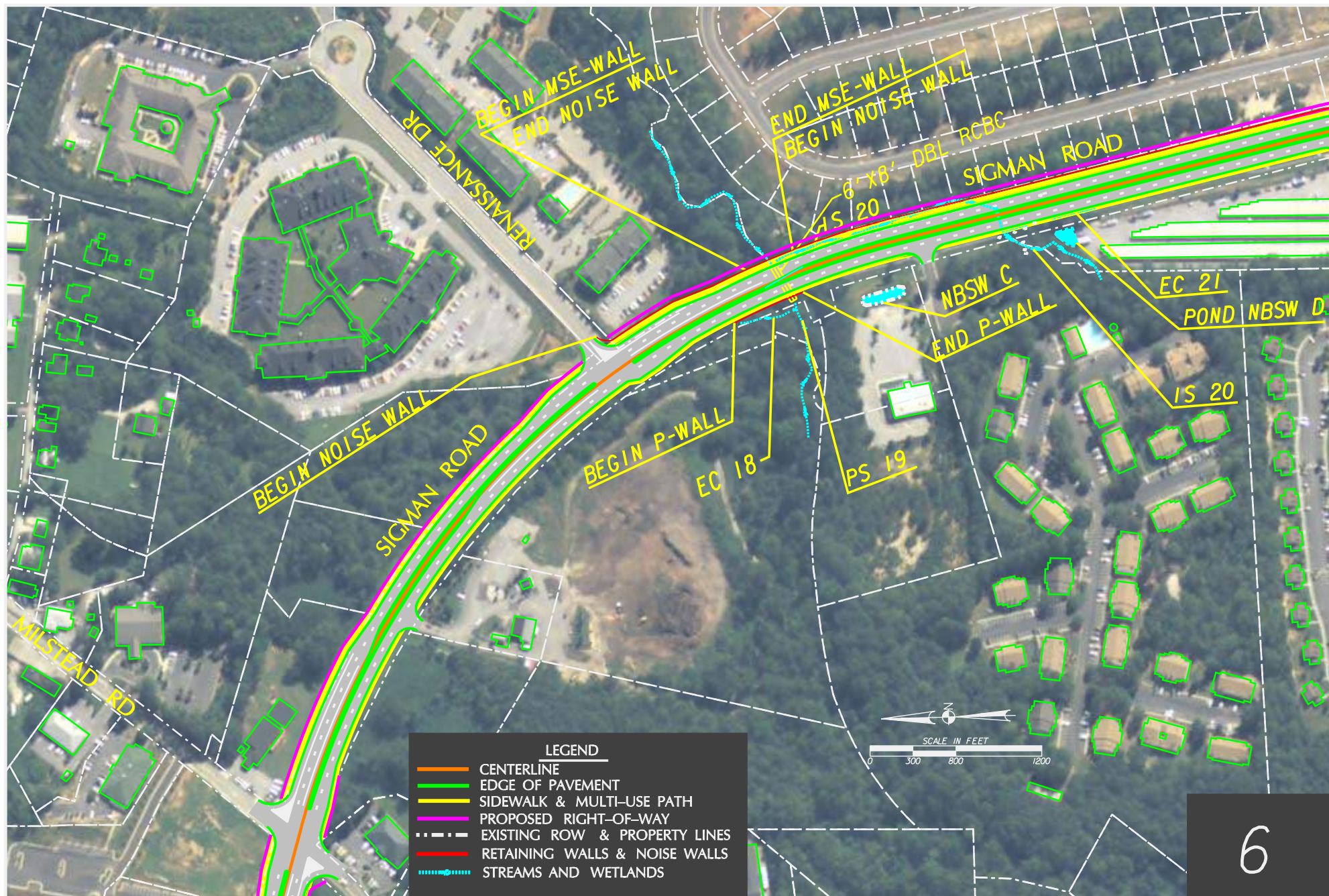
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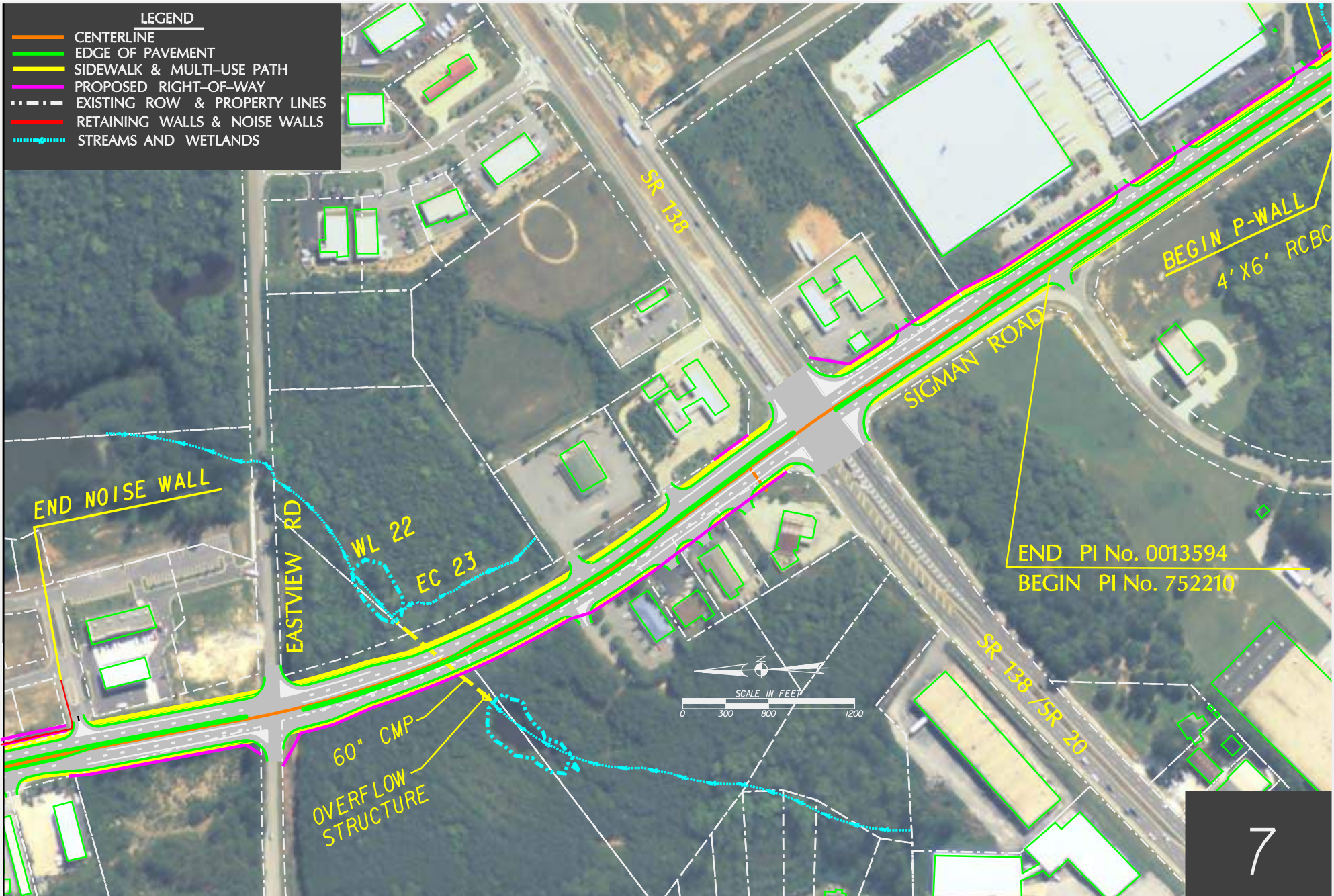
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- EDGE OF PAVEMENT
- SIDEWALK & MULTI-USE PATH
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- EXISTING ROW & PROPERTY LINES
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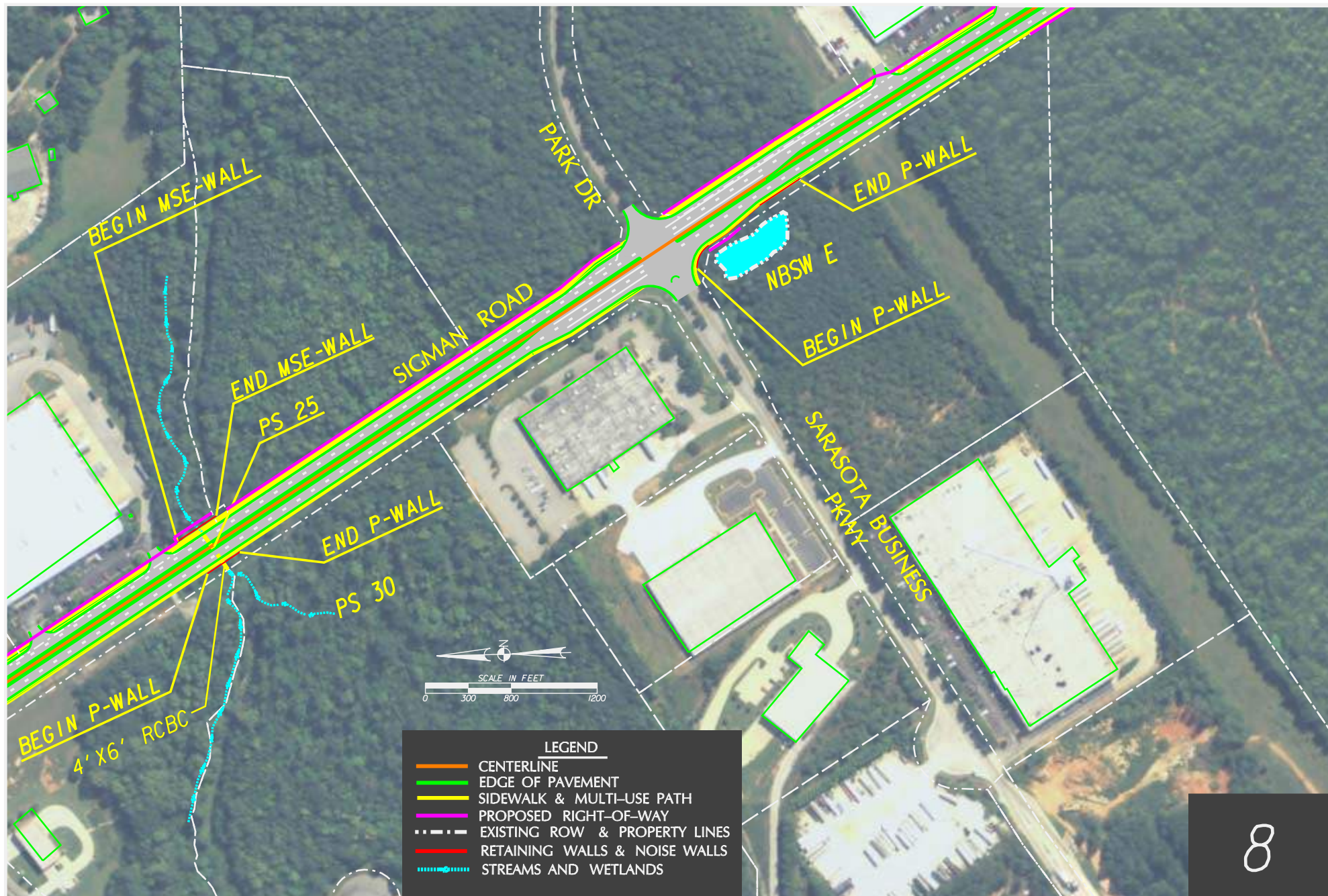






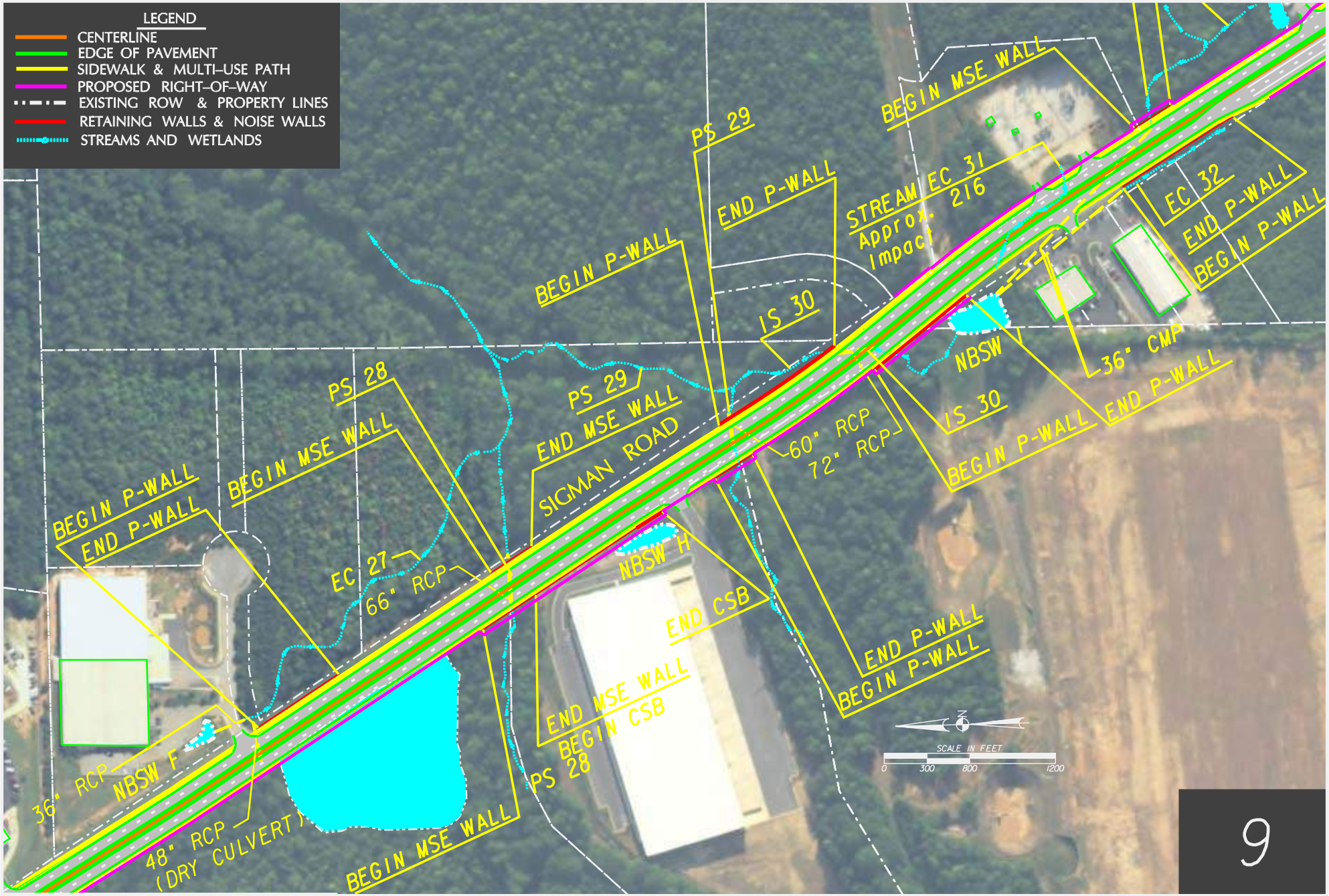






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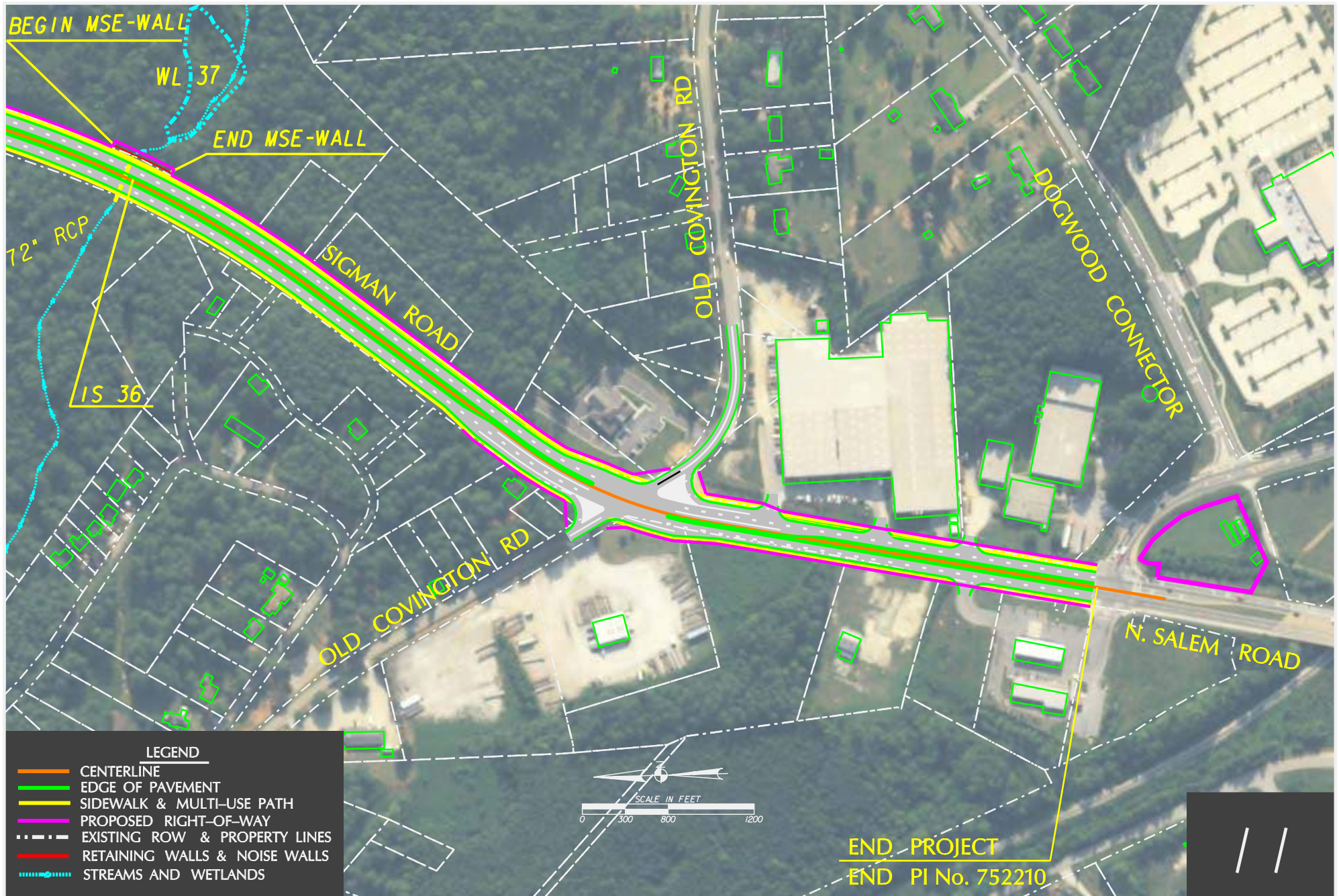
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- PROPOSED RIGHT-OF-WAY
- EXISTING ROW & PROPERTY LINES
- RETAINING WALLS & NOISE WALLS
- STREAMS AND WETLANDS



LEGEND

- CENTERLINE
- EDGE OF PAVEMENT
- SIDEWALK & MULTI-USE PATH
- PROPOSED RIGHT-OF-WAY
- EXISTING ROW & PROPERTY LINES
- RETAINING WALLS & NOISE WALLS
- STREAMS AND WETLANDS





Attachment 2

Typical Section

TIME## \$PRF#
\$PENTABLE##

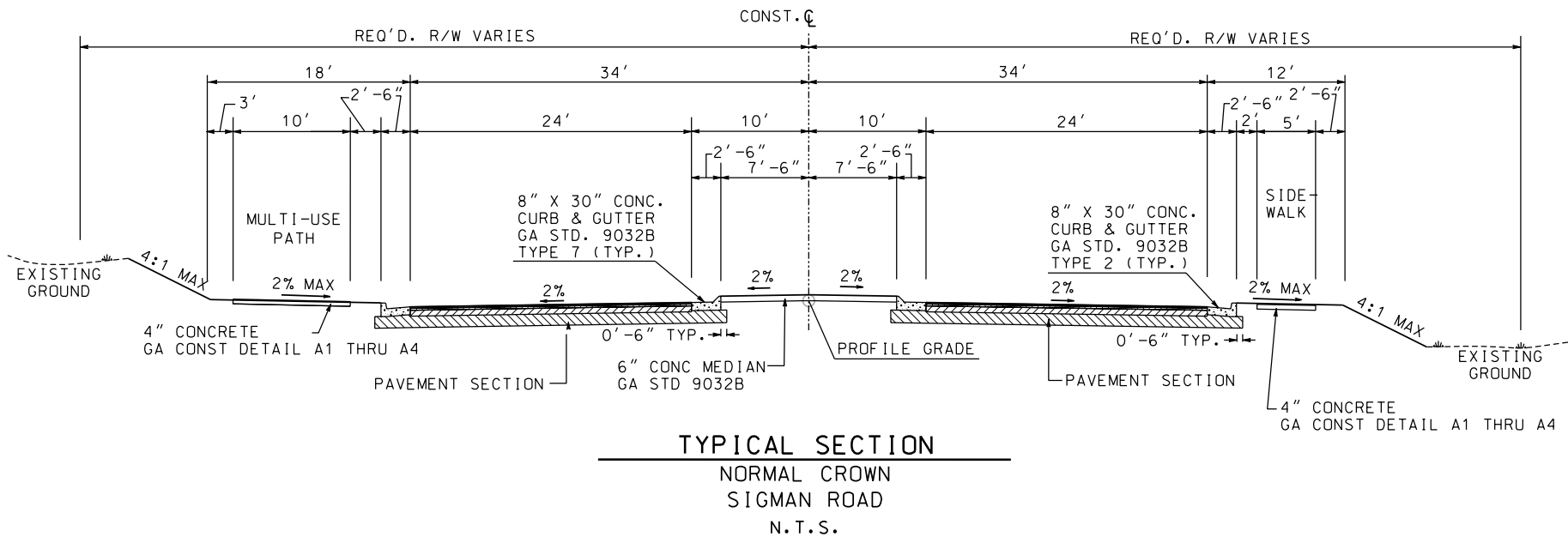
\$DGN#

STATE
GA

PROJECT NUMBER

SHEET NO.

TOTAL SHEETS



PROPOSED PAVEMENT SECTION*

RECYCLED ASPHALT CONCRETE 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME (165 LBS/SY)
 RECYCLED ASPHALT CONCRETE 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LBS/SY)
 RECYCLED ASPHALT CONCRETE 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (440 LBS/SY)
 GRADED AGGREGATE BASE COURSE 12", INCL MATL

* FOR COST ESTIMATING PURPOSES



**Moreland Altobelli
Associates, Inc.**
 2211 Beaver Run Road
 Suite 190
 Norcross, Georgia 30071
 Telephone (770) 263-5945

REVISION DATES

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY

TYPICAL SECTIONS

SIGMAN RD

DRAWING No.
05-001

Attachment 3

Detailed Cost Estimates

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 0013163 **OFFICE** Program Delivery

PROJECT DESCRIPTION

SIGMAN RD FM E OF CR 79/LESTER RD TO CS 442/IRWIN BRIDGE
RD

DATE October 22, 2015

From: Albert V. Shelby, III, State Program Delivery Engineer *Kimberly Acabitt*

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Xavier James

MGMT LET DATE 6/15/2018

MGMT ROW DATE 5/15/2017

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ 6,000,977.39

DATE 7/17/2015

RIGHT OF WAY \$ 2,943,000.01

DATE 7/17/2015

UTILITIES \$ -

DATE -

REVISED COST ESTIMATES

CONSTRUCTION* \$ 8,636,939.79

RIGHT OF WAY \$ 595,000.00

UTILITIES \$ 1,954,458.00

*Cost Contains 15 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

THE PROJECT TYPE IS RECONSTRUCTION/REHABILITATION ADDED CAPACITY. THE MID POINT CONTINGENCY OF 15% WAS USE DUE TO THE PROJECT'S POTENTIAL FOR INCREASED COSTS FOR RETAINING WALLS TO AVOID ENVIRONMENTAL RESOURCES. THE CONSTRUCTION, ROW, AND UTILITY COSTS OF THE MULTI-USE TRAIL ON THIS PROJECT IS BEING FUNDED THROUGH P.I. NO. 0012886.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	7,028,212.57	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	351,410.63	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	1,106,943.48	Base Estimate (A) + E & I (B) x 15 % <u>See % Table in "Risk Based Cost Estimation" Memo</u>
D. TOTAL LIQUID AC ADJUSTMENT:	\$	150,373.11	Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	8,636,939.79	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
Georgia Power Transmission	\$300,000.00
Georgia Power Distribution	\$1,654,458.00
TOTAL	\$ 1,954,458.00

ATTACHMENTS:

Detailed Cost Estimate Printout From CES
Liquid AC Adjustment Spreadsheet

GEORGIA DEPARTMENT OF TRANSPORTATION

DATE : 10/21/2015

PAGE : 1

JOB DETAIL ESTIMATE

JOB NUMBER : 0013163 SPEC YEAR: 01
DESCRIPTION: SIGMAN RD WIDENING - PHASE 1
EAST OF LESTER RD TO IRWIN BRIDGE ROAD

ITEMS FOR JOB 0013163

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - 0013163	1.000	1635000.00	1635000.00
0010	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	80765.50	80765.50
0015	210-0100		LS	GRADING COMPLETE - 0013163	1.000	1200000.00	1200000.00
0020	318-3000		TN	AGGR SURF CRS	1500.000	20.82	31239.39
0025	310-1101		TN	GR AGGR BASE CRS, INCL MATL	13600.000	23.40	318306.78
0030	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	3320.000	77.62	257730.07
0035	402-3130		TN	RECYL AC 12.5MM SP,GP2,BM&HL	3350.000	80.88	270951.22
0040	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	4450.000	77.73	345910.74
0044	402-4510		TN	RECYL AC 12.5 MM SP,GP2ONLY,INC P-MBM&HL	40.000	116.28	4651.40
0045	413-1000		GL	BITUM TACK COAT	6100.000	3.02	18469.52
0050	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	20100.000	2.50	50251.61
0055	446-1100		LF	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	5800.000	4.05	23539.82
0060	433-1100		SY	REF CONC APPR SL/INCL CURB	700.000	176.52	123564.00
0065	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	1000.000	36.92	36929.98
0070	441-0104		SY	CONC SIDEWALK, 4 IN	3820.000	31.66	120968.63
0074	441-0740		SY	CONC MEDIAN, 4 IN	6900.000	24.95	172162.52
0075	441-0748		SY	CONC MEDIAN, 6 IN	770.000	51.25	39465.87
0080	441-4020		SY	CONC VALLEY GUTTER, 6 IN	1500.000	36.59	54892.74
0085	441-4030		SY	CONC VALLEY GUTTER, 8 IN	1500.000	44.15	66239.16
0094	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	12500.000	12.87	160973.63
0095	441-6740		LF	CONC CURB & GUTTER/ 8"X30" TP7	8700.000	15.41	134126.42
0100	444-1000		LF	SAWED JTS IN EXIST PVMTS - PCC	1800.000	3.53	6355.22
0105	500-9999		CY	CL B CONC,BASE OR PVMT WIDEN	790.000	192.46	152044.43
0110	641-1200		LF	GUARDRAIL, TP W	100.000	21.68	2168.74
0115	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	1.000	801.98	801.98
0120	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	1.000	2608.75	2608.76
0125	500-3115		LF	CLASS A CONCRETE, TYPE P2, RETAINING WALL	102.000	458.00	46716.00
0130	500-3120		LF	CLASS A CONCRETE, TYPE P3, RETAINING WALL	197.000	588.00	115836.00
0135	627-1000		SF	MSE WALL FACE, 0 - 10 FT HT, WALL NO -0013163	100.000	49.11	4911.61
0140	627-1010		SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 0013163	1555.000	48.32	75153.09
0145	627-1020		SF	MSE WALL FACE, 20 - 30 FT HT, WALL NO -	3014.000	42.94	129435.78
0150	627-1100		LF	COPING A, WALL NO - 0013163	432.000	71.29	30800.78
0155	550-1180		LF	STM DR PIPE 18",H 1-10	6572.000	34.59	227387.32
0160	550-1181		LF	STM DR PIPE 18",H 10-15	74.000	37.98	2810.52
0165	550-1240		LF	STM DR PIPE 24",H 1-10	2031.000	44.18	89745.91

0170	550-1241	LF	STM DR PIPE 24",H 10-15	111.000	56.34	6253.74
0175	550-1300	LF	STM DR PIPE 30",H 1-10	1292.000	56.15	72558.54
0180	550-1360	LF	STM DR PIPE 36",H 1-10	295.000	72.15	21286.63
0185	550-3318	EA	SAFETY END SECTION 18",STD,4:1	1.000	678.28	678.28
0190	550-3324	EA	SAFETY END SECTION 24",STD,4:1	1.000	1186.48	1186.48
0195	550-4224	EA	FLARED END SECT 24 IN, ST DR	1.000	718.52	718.52
0200	550-4230	EA	FLARED END SECT 30 IN, ST DR	1.000	784.92	784.92
0205	550-4236	EA	FLARED END SECT 36 IN, ST DR	1.000	1201.06	1201.07
0210	603-2181	SY	STN DUMPED RIP RAP, TP 3, 18"	332.000	43.47	14433.03
0215	603-7000	SY	PLASTIC FILTER FABRIC	332.000	4.25	1412.68
0220	611-8040	EA	ADJUST DROP INLET TO GRADE	1.000	918.62	918.62
0225	611-8050	EA	ADJUST MANHOLE TO GRADE	1.000	894.01	894.01
0230	668-1100	EA	CATCH BASIN, GP 1	66.000	2308.63	152370.15
0235	668-1110	LF	CATCH BASIN, GP 1, ADDL DEPTH	89.000	183.99	16375.87
0240	668-2100	EA	DROP INLET, GP 1	26.000	1937.87	50384.87
0245	668-2105	EA	DROP INLET, GP 1, SPCL DES	1.000	2625.00	2625.00
0250	668-2110	LF	DROP INLET, GP 1, ADDL DEPTH	30.000	206.82	6204.64
0255	668-4300	EA	STORM SEW MANHOLE, TP 1	10.000	2052.94	20529.45
0260	668-4311	LF	ST SEW MANHOLE,TP 1,A DEP,CL 1	26.000	222.25	5778.61
0265	668-5000	EA	JUNCTION BOX	1.000	1936.36	1936.37
0270	163-0232	AC	TEMPORARY GRASSING	3.500	574.10	2009.35
0275	163-0240	TN	MULCH	92.500	227.04	21001.49
0280	163-0300	EA	CONSTRUCTION EXIT	1.000	1383.68	1383.68
0285	163-0501	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 1	2.000	491.31	982.62
0290	163-0503	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 3	3.000	430.69	1292.08
0295	163-0520	LF	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	148.000	18.32	2712.00
0300	163-0528	LF	CONSTR AND REM FAB CK DAM -TP C SLT FN	1182.000	3.85	4551.73
0305	163-0529	LF	CNST/REM TEMP SED BAR OR BLD STRW CK DM	4062.000	3.50	14217.32
0310	163-0550	EA	CONS & REM INLET SEDIMENT TRAP	85.000	129.58	11015.00
0315	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	7940.000	0.48	3820.09
0320	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	5170.000	0.55	2850.94
0325	165-0041	LF	MAINT OF CHECK DAMS - ALL TYPES	591.000	2.04	1210.94
0330	165-0071	LF	MAINT OF SEDIMENT BARRIER - BALED STRAW	2031.000	0.38	787.20
0335	165-0085	EA	MAINT OF SILT CONTROL GATE, TP 1	1.000	157.21	157.21
0340	165-0087	EA	MAINT OF SILT CONTROL GATE, TP 3	2.000	144.76	289.54
0345	165-0101	EA	MAINT OF CONST EXIT	2.000	570.22	1140.45
0350	165-0105	EA	MAINT OF INLET SEDIMENT TRAP	85.000	35.79	3042.76
0355	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	1.000	231.67	231.67
0360	167-1500	MO	WATER QUALITY INSPECTIONS	9.000	732.83	6595.48
0365	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	7940.000	1.58	12598.00
0370	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	5170.000	3.05	15777.13
0375	700-6910	AC	PERMANENT GRASSING	7.500	892.46	6693.52
0380	700-7000	TN	AGRICULTURAL LIME	18.500	94.10	1740.90
0385	700-8000	TN	FERTILIZER MIXED GRADE	5.500	539.68	2968.29
0390	700-8100	LB	FERTILIZER NITROGEN CONTENT	295.500	2.57	761.21
0395	716-2000	SY	EROSION CONTROL MATS, SLOPES	5170.000	1.00	5179.62
0400	636-1020	SF	HWY SGN,TP1MAT,REFL SH TP3	200.000	15.31	3063.54
0405	636-1033	SF	HWY SIGNS, TP1MAT,REFL SH TP 9	500.000	18.03	9019.70
0420	636-2080	LF	GALV STEEL POSTS, TP 8	900.000	9.14	8231.89
0465	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	30.000	80.09	2402.71
0474	653-0160	EA	THERM PVMT MARK, ARROW, TP 6	20.000	115.00	2300.00
0475	653-1704	LF	THERM SOLID TRAF STRIPE,24",WH	320.000	6.06	1941.96

0490	653-2501	LM	THERMO SOLID TRAF ST, 5 IN, WH	9.000	1766.34	15897.08
0495	653-2502	LM	THERMO SOLID TRAF ST, 5 IN YE	3.000	1741.33	5224.01
0500	653-2804	LM	THERM SOLID TRAF STRIPE, 8",WH	2.000	9776.00	19552.00
0515	653-4501	GLM	THERMO SKIP TRAF ST, 5 IN, WHI	5.000	1045.48	5227.43
0530	654-1001	EA	RAISED PVMT MARKERS TP 1	100.000	3.87	387.21
0535	654-1003	EA	RAISED PVMT MARKERS TP 3	300.000	3.58	1074.03
0550	615-1200	LF	DIRECTIONAL BORE - 0013163	3.000	20.72	62.16
0555	636-1041	SF	HWY SIGNS,TP 2MAT,REFL SH TP 9 TRAFFIC SIGNAL SIGNS	148.000	35.95	5321.34
0565	639-4004	EA	STRAIN POLE, TP IV	8.000	7963.30	63706.41
0570	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #1	1.000	8500.00	8500.00
0575	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #2	1.000	7940.00	7940.00
0594	647-2140	EA	PULL BOX, PB-4	2.000	1180.00	2360.00
0595	647-2160	EA	PULL BOX, PB-6	2.000	1268.87	2537.74
0600	647-2170	EA	PULL BOX, PB-7	1.000	1580.46	1580.46
0604	682-6222	LF	CONDUIT, NONMETL, TP 2, 2 IN	90.000	5.64	507.60
0605	682-6233	LF	CONDUIT, NONMETL, TP 3, 2 IN	3620.000	5.25	19005.00
0609	682-9010	EA	SVC POLE RISER	2.000	2387.00	4774.00
0610	682-9028	EA	ELECTRICAL COMM BOX, TP 5	1.000	750.00	750.00
0614	682-9950	LF	DIRECTIONAL BORE - 0013163	190.000	10.00	1900.00
0619	935-1117	LF	OUT PLNT FBR OPT CBL,LOOSE TB,SM,96 FBR	4935.000	4.74	23391.90
0620	935-1511	LF	OUT PLNT FBR OPT CBL,DROP,SM,6 FBR	660.000	2.98	1966.80
0634	935-3207	EA	FBR OPTIC CLOSURE,AERL(SLD),96 FBR	2.000	1500.00	3000.00
0635	935-3602	EA	FBR. OP. CLOS., FDC PRE-TERM., TYP. A,6	2.000	523.00	1046.00
0640	935-4010	EA	FIBER OPTIC SPLICE, FUSION	192.000	45.29	8695.68
0645	935-5030	EA	FIBER OPTIC CONNECTORS, SM	96.000	50.00	4800.00
0650	935-5050	EA	FIBER OPTIC PATCH CORD, SM	50.000	100.00	5000.00
0655	935-5060	EA	FIBER OPTIC SNOWSHOE	3.000	129.00	387.00
0660	935-8000	LS	TESTING	1.000	1501.00	1501.00
0665	937-8000	LS	TESTING	1.000	987.50	987.50
0670	939-2305	EA	FIELD SWITCH, TYPE C	2.000	2533.33	5066.66
0675	939-4030	EA	TYPE C CABINET	1.000	3500.00	3500.00
0680	939-8000	LS	TESTING	1.000	1300.00	1300.00
0685	681-4300	EA	LT STD, 30' MH, 6' ARM	21.000	3110.00	65310.00
0690	681-6246	EA	LUMINAIRE,TP 2, 250W,HP SODIUM	21.000	1391.00	29211.00
0695	682-1406	LF	CABLE, TP XHHW, AWG NO 6	8300.000	1.20	9960.00
0700	682-6221	LF	CONDUIT, NONMETL, TP 2, 1 1/2"	7200.000	3.15	22680.00
0705	682-6222	LF	CONDUIT, NONMETL, TP 2, 2 IN	1200.000	7.23	8676.00
0710	682-9000	LS	MAIN SVC PICK UP POINT POINT A	1.000	8500.00	8500.00
0715	682-9000	LS	MAIN SVC PICK UP POINT POINT B	1.000	8500.00	8500.00
0720	682-9021	EA	ELEC JCT BX,CONC GRD MOUNTED	26.000	1723.45	44809.92
0725	682-9950	LF	DIRECTIONAL BORE - 2 INCH	600.000	12.00	7200.00
0730	950-3540	EA	INSTALL TELECOM FACIL, PRECAST MANHOLE TP 1 CL 1	1.000	33000.00	33000.00

ITEM TOTAL						7028212.57
INFLATED ITEM TOTAL						7028212.57

TOTALS FOR JOB 0013163

ESTIMATED COST:						7028212.57
CONTINGENCY PERCENT (0.0):						0.00
ESTIMATED TOTAL:						7028212.57

PROJ. NO.

P.I. NO.

DATE

0013163	
10/15/2015	

CALL NO.

9/29/2009

INDEX (TYPE)

DATE

INDEX

REG. UNLEADED

DIESEL

LIQUID AC

Oct-15	\$ 2.155
	\$ 2.485
	\$ 429.00

Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>**LIQUID AC ADJUSTMENTS****PA=(((APM-APL)/APL))xTMTxAPL****Asphalt**

Price Adjustment (PA)

143629.2

\$

143,629.20

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

558

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	3390	5.0%	169.5
9.5 mm SP		5.0%	0
25 mm SP	3320	5.0%	166
19 mm SP	4450	5.0%	222.5
	11160		558

BITUMINOUS TACK COAT

Price Adjustment (PA)

\$ **6,743.91**

\$

6,743.91

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

26.20011562

Bitum Tack

Gals	gals/ton	tons
6100	232.8234	26.2001156

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)

0

\$

-

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

0

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.	0	0.20	0	232.8234	0
Double Surf. Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0

TOTAL LIQUID AC ADJUSTMENT

\$

150,373.11

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. OFFICE

PROJECT DESCRIPTION

DATE

From:

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPRo W/OUT INFLATION)

CONSTRUCTION \$

RIGHT OF WAY \$

UTILITIES \$

LAST ESTIMATE UPDATE

DATE

DATE

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

*Cost Contains % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

THE PROJECT TYPE IS ENHANCE/BICYCLE/PEDESTRIAN FACILITY/SAFETY. THE MID POINT CONTINUENCY OF 15% WAS USED DUE TO THE PROJECT'S POTENTIAL FOR INCREASED COSTS FOR RETAINING WALLS TO AVOID ENVIRONMENTAL RESOURCES.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$ 1,705,622.22	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$ 85,281.11	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$ 268,635.50	Base Estimate (A) + E & I (B) x	15 %
		<u>See % Table in "Risk Based Cost Estimation" Memo</u>	
D. TOTAL LIQUID AC ADJUSTMENT:	\$ -	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$ 2,059,538.83	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
Georgia Power Transmission	\$150,000.00
Georgia Power Distribution	\$1,399,926.00
Rockdale County Water	\$31,450.00
TOTAL	\$ 1,581,376.00

ATTACHMENTS:

Detailed Cost Estimate Printout From CES

GEORGIA DEPARTMENT OF TRANSPORTATION

DATE : 10/21/2015

PAGE : 1

JOB DETAIL ESTIMATE

JOB NUMBER : 0012886 SPEC YEAR: 01
DESCRIPTION: SIGMAN RD WIDENING - MULTI-USE TRAIL
EAST OF LESTER RD TO IRWIN BRIDGE ROAD

ITEMS FOR JOB 0012886

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0015	210-0100		LS	GRADING COMPLETE - 0012886	1.000	900000.00	900000.00
0070	441-0104		SY	CONC SIDEWALK, 4 IN	7630.000	28.86	220265.89
0270	163-0232		AC	TEMPORARY GRASSING	3.500	574.10	2009.35
0275	163-0240		TN	MULCH	92.500	227.04	21001.49
0315	165-0010		LF	MAINT OF TEMP SILT FENCE, TP A	7940.000	0.48	3820.09
0320	165-0030		LF	MAINT OF TEMP SILT FENCE, TP C	5170.000	0.55	2850.94
0365	171-0010		LF	TEMPORARY SILT FENCE, TYPE A	7940.000	1.58	12598.00
0370	171-0030		LF	TEMPORARY SILT FENCE, TYPE C	5170.000	3.05	15777.13
0375	700-6910		AC	PERMANENT GRASSING	7.500	892.46	6693.52
0380	700-7000		TN	AGRICULTURAL LIME	18.500	94.10	1740.90
0385	700-8000		TN	FERTILIZER MIXED GRADE	5.500	539.68	2968.29
0390	700-8100		LB	FERTILIZER NITROGEN CONTENT	295.500	2.57	761.21
0395	500-3120		LF	CLASS A CONCRETE, TYPE P3, RETAINING WALL	260.000	588.00	152880.00
0400	627-1010		SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 0012886	2700.000	46.07	124408.49
0405	681-4300		EA	LT STD, 30' MH, 6' ARM	21.000	3110.00	65310.00
0410	681-6246		EA	LUMINAIRE, TP 2, 250W, HP SODIUM	21.000	1391.00	29211.00
0415	682-1406		LF	CABLE, TP XHHW, AWG NO 6	8300.000	1.20	9960.00
0420	682-6221		LF	CONDUIT, NONMETL, TP 2, 1 1/2"	7200.000	3.15	22680.00
0425	682-6222		LF	CONDUIT, NONMETL, TP 2, 2 IN	1200.000	7.23	8676.00
0430	682-9000		LS	MAIN SVC PICK UP POINT POINT A	1.000	8500.00	8500.00
0435	682-9000		LS	MAIN SVC PICK UP POINT POINT B	1.000	8500.00	8500.00
0440	682-9021		EA	ELEC JCT BX, CONC GRD MOUNTED	26.000	1723.45	44809.92
0445	682-9950		LF	DIRECTIONAL BORE - 2 INCH	600.000	12.00	7200.00
0450	950-3540		EA	INSTALL TELECOM FACIL, PRECAST MANHOLE TP 1, CL 1	1.000	33000.00	33000.00
ITEM TOTAL							1705622.23
INFLATED ITEM TOTAL							1705622.23

TOTALS FOR JOB 0012886

ESTIMATED COST:	1705622.22
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	1705622.22

PROJ. NO.

P.I. NO.

DATE

0012886	
1/9/2015	

CALL NO.

9/29/2009

INDEX (TYPE)

DATE

INDEX

REG. UNLEADED

DIESEL

LIQUID AC

Oct-15	\$	2.186
	\$	-
	\$	556.00

Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>**LIQUID AC ADJUSTMENTS**

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)

0

\$

-

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$

889.60

Monthly Asphalt Cement Price month project let (APL)

\$

556.00

Total Monthly Tonnage of asphalt cement (TMT)

0

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	0	5.0%	0
9.5 mm SP		5.0%	0
25 mm SP	0	5.0%	0
19 mm SP	0	5.0%	0
	0		0

BITUMINOUS TACK COAT

Price Adjustment (PA)

\$

-

\$

-

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$

889.60

Monthly Asphalt Cement Price month project let (APL)

\$

556.00

Total Monthly Tonnage of asphalt cement (TMT)

0

Bitum Tack

Gals	gals/ton	tons
0	232.8234	0

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)

0

\$

-

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$

889.60

Monthly Asphalt Cement Price month project let (APL)

\$

556.00

Total Monthly Tonnage of asphalt cement (TMT)

0

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.	0	0.20	0	232.8234	0
Double Surf. Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

TOTAL LIQUID AC ADJUSTMENT

\$

-

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. OFFICE

PROJECT DESCRIPTION

SR 20 & SIGMAN ROAD FROM CS 442/IRWIN BRIDGE ROAD TO
SR 138

DATE

From:

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

*Cost Contains % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

THE PROJECT TYPE IS RECONSTRUCTION/REHABILITATION ADDED CAPACITY. THE MID POINT CONTINGENCY OF 15% WAS USE DUE TO THE PROJECT'S POTENTIAL FOR INCREASED COSTS FOR RETAINING WALLS TO AVOID ENVIRONMENTAL RESOURCES.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	17,009,355.49	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	850,467.77	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	2,678,973.49	Base Estimate (A) + E & I (B) x	15 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	394,118.30	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	20,932,915.05	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
Georgia Power Transmission	\$200,000.00
Georgia Power Distribution	\$3,690,714.00
TOTAL	\$ 3,890,714.00

ATTACHMENTS:

Detailed Cost Estimate Printout From CES
Liquid AC Adjustment Spreadsheet

GEORGIA DEPARTMENT OF TRANSPORTATION

DATE : 10/21/2015

PAGE : 1

JOB DETAIL ESTIMATE

JOB NUMBER : 0013594 SPEC YEAR: 01
DESCRIPTION: SIGMAN RD WIDENING - PHASE 2
IRWIN BRIDGE ROAD TO SR 138

ITEMS FOR JOB 0013594

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - 0013594	1.000	3650000.00	3650000.00
0010	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	80765.50	80765.50
0015	210-0100		LS	GRADING COMPLETE - 0013594	1.000	3828000.00	3828000.00
0020	318-3000		TN	AGGR SURF CRS	1500.000	20.82	31239.39
0025	310-1101		TN	GR AGGR BASE CRS, INCL MATL	31000.000	21.96	681017.92
0030	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	7600.000	73.48	558481.97
0035	402-3130		TN	RECYL AC 12.5MM SP,GP2,BM&HL	9150.000	72.87	666787.58
0040	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	12200.000	72.14	880137.65
0044	402-4510		TN	RECYL AC 12.5 MM SP,GP2ONLY,INC P-MBM&HL	290.000	101.35	29393.60
0045	413-1000		GL	BITUM TACK COAT	16100.000	2.68	43274.22
0050	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	45900.000	1.97	90485.88
0055	446-1100		LF	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	17800.000	3.31	58952.53
0060	433-1100		SY	REF CONC APPR SL/INCL CURB	700.000	176.52	123564.00
0065	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	1000.000	36.92	36929.98
0070	441-0104		SY	CONC SIDEWALK, 4 IN	23100.000	24.89	575028.30
0074	441-0740		SY	CONC MEDIAN, 4 IN	14600.000	23.19	338577.50
0075	441-0748		SY	CONC MEDIAN, 6 IN	3200.000	48.45	155049.09
0080	441-4020		SY	CONC VALLEY GUTTER, 6 IN	1500.000	36.59	54892.74
0085	441-4030		SY	CONC VALLEY GUTTER, 8 IN	1500.000	44.15	66239.16
0094	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	32400.000	11.43	370457.39
0095	441-6740		LF	CONC CURB & GUTTER/ 8"X30" TP7	18800.000	14.48	272388.50
0100	444-1000		LF	SAWED JTS IN EXIST PVMTS - PCC	1800.000	3.53	6355.22
0105	500-9999		CY	CL B CONC,BASE OR PVMT WIDEN	1500.000	188.26	282401.91
0110	641-1200		LF	GUARDRAIL, TP W	1575.000	19.06	30029.88
0115	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	2.000	853.12	1706.25
0120	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	2.000	2214.35	4428.70
0125	500-3115		LF	CLASS A CONCRETE, TYPE P2, RETAINING WALL	400.000	458.00	183200.00
0130	500-3120		LF	CLASS A CONCRETE, TYPE P3, RETAINING WALL	180.000	588.00	105840.00
0135	627-1000		SF	MSE WALL FACE, 0 - 10 FT HT, WALL NO - 0013594	100.000	49.11	4911.61
0140	627-1010		SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO -0013594	4623.000	43.98	203331.88
0145	627-1020		SF	MSE WALL FACE, 20 - 30 FT HT, WALL NO - 0013594	6125.000	46.91	287323.75
0150	627-1100		LF	COPING A, WALL NO - 0013594	484.000	70.35	34053.54
0155	550-1180		LF	STM DR PIPE 18",H 1-10	15733.000	31.73	499354.25
0160	550-1181		LF	STM DR PIPE 18",H 10-15	178.000	37.98	6760.44
0165	550-1240		LF	STM DR PIPE 24",H 1-10	4889.000	40.80	199477.31

0170	550-1241	LF	STM DR PIPE 24",H 10-15	267.000	56.34	15042.78
0175	550-1300	LF	STM DR PIPE 30",H 1-10	3111.000	54.13	168423.50
0180	550-1360	LF	STM DR PIPE 36",H 1-10	711.000	67.98	48340.68
0185	550-3318	EA	SAFETY END SECTION 18",STD,4:1	1.000	678.28	678.28
0190	550-3324	EA	SAFETY END SECTION 24",STD,4:1	1.000	1186.48	1186.48
0195	550-4224	EA	FLARED END SECT 24 IN, ST DR	1.000	718.52	718.52
0200	550-4230	EA	FLARED END SECT 30 IN, ST DR	1.000	784.92	784.92
0205	550-4236	EA	FLARED END SECT 36 IN, ST DR	1.000	1201.06	1201.07
0210	603-2181	SY	STN DUMPED RIP RAP, TP 3, 18"	800.000	40.82	32662.54
0215	603-7000	SY	PLASTIC FILTER FABRIC	800.000	4.04	3237.97
0220	611-8040	EA	ADJUST DROP INLET TO GRADE	1.000	918.62	918.62
0225	611-8050	EA	ADJUST MANHOLE TO GRADE	1.000	894.01	894.01
0230	668-1100	EA	CATCH BASIN, GP 1	159.000	2309.01	367133.41
0235	668-1110	LF	CATCH BASIN, GP 1, ADDL DEPTH	213.000	179.00	38128.61
0240	668-2100	EA	DROP INLET, GP 1	62.000	1921.97	119162.15
0245	668-2105	EA	DROP INLET, GP 1, SPCL DES	1.000	2625.00	2625.00
0250	668-2110	LF	DROP INLET, GP 1, ADDL DEPTH	63.000	203.29	12807.74
0255	668-4300	EA	STORM SEW MANHOLE, TP 1	23.000	2052.94	47217.74
0260	668-4311	LF	ST SEW MANHOLE,TP 1,A DEP,CL 1	62.000	214.25	13284.03
0265	668-5000	EA	JUNCTION BOX	1.000	1936.36	1936.37
0270	163-0232	AC	TEMPORARY GRASSING	18.000	545.42	9817.67
0275	163-0240	TN	MULCH	444.000	171.61	76195.99
0280	163-0300	EA	CONSTRUCTION EXIT	3.000	1333.65	4000.95
0285	163-0501	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 1	4.000	491.31	1965.24
0290	163-0503	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 3	7.000	415.99	2911.98
0295	163-0520	LF	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	356.000	16.48	5869.59
0300	163-0528	LF	CONSTR AND REM FAB CK DAM -TP C SLT FN	2844.000	3.63	10333.42
0305	163-0529	LF	CNST/REM TEMP SED BAR OR BLD STRW CK DM	9778.000	3.15	30845.48
0310	163-0550	EA	CONS & REM INLET SEDIMENT TRAP	204.000	126.06	25717.16
0315	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	19111.000	0.41	7940.81
0320	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	12445.000	0.44	5508.53
0325	165-0041	LF	MAINT OF CHECK DAMS - ALL TYPES	1422.000	1.66	2371.98
0330	165-0071	LF	MAINT OF SEDIMENT BARRIER - BALED STRAW	4889.000	0.33	1641.29
0335	165-0085	EA	MAINT OF SILT CONTROL GATE, TP 1	4.000	157.21	628.84
0340	165-0087	EA	MAINT OF SILT CONTROL GATE, TP 3	7.000	101.31	709.18
0345	165-0101	EA	MAINT OF CONST EXIT	5.000	635.50	3177.52
0350	165-0105	EA	MAINT OF INLET SEDIMENT TRAP	204.000	31.43	6412.41
0355	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	2.000	230.63	461.27
0360	167-1500	MO	WATER QUALITY INSPECTIONS	21.000	391.32	8217.78
0365	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	38226.000	1.32	50829.11
0370	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	24889.000	2.75	68457.19
0375	700-6910	AC	PERMANENT GRASSING	36.000	937.39	33746.38
0380	700-7000	TN	AGRICULTURAL LIME	89.000	81.88	7287.67
0385	700-8000	TN	FERTILIZER MIXED GRADE	27.000	491.98	13283.61
0390	700-8100	LB	FERTILIZER NITROGEN CONTENT	1422.000	2.02	2880.36
0395	716-2000	SY	EROSION CONTROL MATS, SLOPES	12445.000	0.94	11704.02
0400	636-1020	SF	HWY SGN,TP1MAT,REFL SH TP3	200.000	15.31	3063.54
0405	636-1033	SF	HWY SIGNS, TP1MAT,REFL SH TP 9	500.000	18.03	9019.70
0420	636-2080	LF	GALV STEEL POSTS, TP 8	900.000	9.14	8231.89
0465	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	80.000	75.89	6071.54
0474	653-0160	EA	THERM PVMT MARK, ARROW, TP 6	30.000	115.00	3450.00

0475	653-1704	LF	THERM SOLID TRAF STRIPE, 24", WH	720.000	5.67	4082.66
0480	653-0210	EA	THERM PVMT MARK, WORD, TP 1	8.000	108.30	866.47
0490	653-2501	LM	THERMO SOLID TRAF ST, 5 IN, WH	9.000	1766.34	15897.08
0495	653-2502	LM	THERMO SOLID TRAF ST, 5 IN YE	3.000	1741.33	5224.01
0500	653-2804	LM	THERM SOLID TRAF STRIPE, 8", WH	2.000	9776.00	19552.00
0515	653-4501	GLM	THERMO SKIP TRAF ST, 5 IN, WHI	4.000	1045.48	4181.95
0530	654-1001	EA	RAISED PVMT MARKERS TP 1	100.000	3.87	387.21
0535	654-1003	EA	RAISED PVMT MARKERS TP 3	100.000	3.84	384.76
0550	615-1200	LF	DIRECTIONAL BORE - 0013594	3.000	20.72	62.16
0555	636-1041	SF	HWY SIGNS, TP 2MAT, REFL SH TP 9 TRAFFIC SIGNAL SIGNS	148.000	35.95	5321.34
0565	639-4004	EA	STRAIN POLE, TP IV	20.000	7119.77	142395.45
0570	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #1	1.000	8500.00	8500.00
0575	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #2	1.000	7940.00	7940.00
0580	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #3	1.000	5170.00	5170.00
0585	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #4	1.000	5910.00	5910.00
0590	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #5	1.000	2031.00	2031.00
0594	647-2140	EA	PULL BOX, PB-4	5.000	1180.00	5900.00
0595	647-2160	EA	PULL BOX, PB-6	5.000	1268.87	6344.35
0600	647-2170	EA	PULL BOX, PB-7	1.000	1580.46	1580.46
0604	682-6222	LF	CONDUIT, NONMETL, TP 2, 2 IN	200.000	5.64	1128.00
0605	682-6233	LF	CONDUIT, NONMETL, TP 3, 2 IN	4000.000	5.25	21000.00
0609	682-9010	EA	SVC POLE RISER	5.000	2387.00	11935.00
0610	682-9028	EA	ELECTRICAL COMM BOX, TP 5	1.000	750.00	750.00
0614	682-9950	LF	DIRECTIONAL BORE - 0013594	500.000	10.00	5000.00
0619	935-1117	LF	OUT PLNT FBR OPT CBL, LOOSE TB, SM, 96 FBR	5000.000	4.74	23700.00
0620	935-1511	LF	OUT PLNT FBR OPT CBL, DROP, SM, 6 FBR	700.000	2.98	2086.00
0634	935-3207	EA	FBR OPTIC CLOSURE, AERL (SLD), 96 FBR	5.000	1500.00	7500.00
0635	935-3602	EA	FBR. OP. CLOS., FDC PRE-TERM., TYP. A, 6	5.000	523.00	2615.00
0640	935-4010	EA	FIBER OPTIC SPLICE, FUSION	480.000	45.29	21739.20
0645	935-5030	EA	FIBER OPTIC CONNECTORS, SM	240.000	50.00	12000.00
0650	935-5050	EA	FIBER OPTIC PATCH CORD, SM	120.000	100.00	12000.00
0655	935-5060	EA	FIBER OPTIC SNOWSHOE	5.000	129.00	645.00
0660	935-8000	LS	TESTING	1.000	1501.00	1501.00
0665	937-8000	LS	TESTING	1.000	987.50	987.50
0670	939-2305	EA	FIELD SWITCH, TYPE C	5.000	2533.33	12666.65
0675	939-4030	EA	TYPE C CABINET	1.000	3500.00	3500.00
0680	939-8000	LS	TESTING	1.000	1300.00	1300.00
0685	681-4300	EA	LT STD, 30' MH, 6' ARM	92.000	3110.00	286120.00
0690	681-6246	EA	LUMINAIRE, TP 2, 250W, HP SODIUM	92.000	1391.00	127972.00
0695	682-1406	LF	CABLE, TP XHHW, AWG NO 6	36800.000	1.20	44160.00
0700	682-6221	LF	CONDUIT, NONMETL, TP 2, 1 1/2"	33600.000	3.15	105840.00
0705	682-6222	LF	CONDUIT, NONMETL, TP 2, 2 IN	3600.000	7.23	26028.00
0710	682-9000	LS	MAIN SVC PICK UP POINT POINT A	1.000	8500.00	8500.00
0715	682-9000	LS	MAIN SVC PICK UP POINT POINT B	1.000	8500.00	8500.00
0720	682-9021	EA	ELEC JCT BX, CONC GRD MOUNTED	122.000	1564.56	190877.08
0725	682-9950	LF	DIRECTIONAL BORE - 2 INCH	1800.000	12.00	21600.00
0730	950-3540	EA	INSTALL TELECOM FACIL, PRECAST MANHOLE TP 1 CL 1	2.000	33000.00	66000.00

ITEM TOTAL

17009355.53

INFLATED ITEM TOTAL

17009355.53

TOTALS FOR JOB 0013594

ESTIMATED COST:	17009355.49
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	17009355.49

PROJ. NO.

P.I. NO.

DATE

0013594	
10/15/2015	

CALL NO.

9/29/2009

INDEX (TYPE)

DATE

INDEX

REG. UNLEADED

DIESEL

LIQUID AC

Oct-15	\$ 2.155
	\$ 2.485
	\$ 429.00

Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>**LIQUID AC ADJUSTMENTS**

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)

376318.8

\$

376,318.80

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

1462

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	9440	5.0%	472
9.5 mm SP		5.0%	0
25 mm SP	7600	5.0%	380
19 mm SP	12200	5.0%	610
	29240		1462

BITUMINOUS TACK COAT

Price Adjustment (PA)

\$ 17,799.50

\$

17,799.50

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

69.15112484

Bitum Tack

Gals	gals/ton	tons
16100	232.8234	69.1511248

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)

0

\$

-

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

0

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.	0	0.20	0	232.8234	0
Double Surf. Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0

TOTAL LIQUID AC ADJUSTMENT

\$

394,118.30

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 752210- **OFFICE** Program Delivery

PROJECT DESCRIPTION

SIGMAN RD FM OLD COVINGTON NORTH TO SR 20/138 (EAST LEG)

DATE October 22, 2015

From: Albert V. Shelby, III, State Program Delivery Engineer

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Xavier James

MGMT LET DATE -

MGMT ROW DATE -

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ 6,078,000.00

DATE 3/3/2004

RIGHT OF WAY \$ 1,971,000.00

DATE -

UTILITIES \$ -

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$ 18,858,128.01

RIGHT OF WAY \$ 2,794,000.00

UTILITIES \$ 5,950,367.00

*Cost Contains 15 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

THE PROJECT TYPE IS RECONSTRUCTION/REHABILITATION ADDED CAPACITY. THE MID POINT CONTINGENCY OF 15% WAS USE DUE TO THE PROJECT'S POTENTIAL FOR INCREASED COSTS FOR RETAINING WALLS TO AVOID ENVIRONMENTAL RESOURCES.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	15,350,478.86	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	767,523.94	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	2,417,700.42	Base Estimate (A) + E & I (B) x 15 % <u>See % Table in "Risk Based Cost Estimation" Memo</u>
D. TOTAL LIQUID AC ADJUSTMENT:	\$	322,424.79	Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	18,858,128.01	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
Georgia Power Transmission	\$150,000.00
Georgia Power Distribution	\$4,879,505.00
Snapping Shoals EMC	\$890,862.00
Williams/Transco Pipeline	\$30,000.00
TOTAL	\$ 5,950,367.00

ATTACHMENTS:

Detailed Cost Estimate Printout From CES
Liquid AC Adjustment Spreadsheet

GEORGIA DEPARTMENT OF TRANSPORTATION

DATE : 10/21/2015

PAGE : 1

JOB DETAIL ESTIMATE

JOB NUMBER : 752210 SPEC YEAR: 01
DESCRIPTION: SIGMAN RD WIDENING - PHASE 3
SR 138 TO DOGWOOD CONNECTOR

ITEMS FOR JOB 752210

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - 752210	1.000	2770000.00	2770000.00
0010	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	80765.50	80765.50
0015	210-0100		LS	GRADING COMPLETE - 752210	1.000	2904000.00	2904000.00
0020	318-3000		TN	AGGR SURF CRS	1500.000	20.82	31239.39
0025	310-1101		TN	GR AGGR BASE CRS, INCL MATL	28300.000	22.12	626074.39
0030	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	6900.000	73.95	510299.51
0035	402-3130		TN	RECYL AC 12.5MM SP,GP2,BM&HL	7200.000	74.70	537897.46
0040	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	9550.000	73.46	701560.00
0044	402-4510		TN	RECYL AC 12.5 MM SP,GP2ONLY,INC P-MBM&HL	290.000	101.35	29393.60
0045	413-1000		GL	BITUM TACK COAT	12950.000	2.76	35750.03
0050	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	42000.000	2.02	84940.38
0055	446-1100		LF	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	17100.000	3.33	57047.65
0060	433-1100		SY	REF CONC APPR SL/INCL CURB	700.000	176.52	123564.00
0065	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	1000.000	36.92	36929.98
0070	441-0104		SY	CONC SIDEWALK, 4 IN	20100.000	25.36	509746.05
0074	441-0740		SY	CONC MEDIAN, 4 IN	16200.000	22.95	371886.39
0075	441-0748		SY	CONC MEDIAN, 6 IN	2140.000	49.22	105348.39
0080	441-4020		SY	CONC VALLEY GUTTER, 6 IN	1500.000	36.59	54892.74
0085	441-4030		SY	CONC VALLEY GUTTER, 8 IN	40.000	49.17	1967.03
0094	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	26900.000	11.70	314799.67
0095	441-6740		LF	CONC CURB & GUTTER/ 8"X30" TP7	20200.000	14.40	290983.83
0100	444-1000		LF	SAWED JTS IN EXIST PVMTS - PCC	1800.000	3.53	6355.22
0105	500-9999		CY	CL B CONC,BASE OR PVMT WIDEN	3450.000	182.95	631201.10
0110	641-1200		LF	GUARDRAIL, TP W	1050.000	19.43	20402.75
0115	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	2.000	853.12	1706.25
0120	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	2.000	2214.35	4428.70
0124	500-3110		LF	CLASS A CONCRETE, TYPE P1, RETAINING WALL	165.000	602.00	99330.00
0125	500-3115		LF	CLASS A CONCRETE, TYPE P2, RETAINING WALL	1182.000	458.00	541356.00
0130	500-3120		LF	CLASS A CONCRETE, TYPE P3, RETAINING WALL	450.000	588.00	264600.00
0138	621-6212		LF	CONC SIDE BARRIER, TP 6-SB	220.000	351.00	77220.00
0139	621-6213		LF	CONC SIDE BARRIER, TP 6-SC	137.000	351.00	48087.00
0140	627-1010		SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 752210	7383.000	42.23	311836.36
0145	627-1020		SF	MSE WALL FACE, 20 - 30 FT HT, WALL NO - 752210	7688.000	42.88	329673.97
0150	627-1100		LF	COPING A, WALL NO - 752210	737.000	66.98	49370.81
0155	550-1180		LF	STM DR PIPE 18",H 1-10	14114.000	32.08	452802.38

0160	550-1181	LF	STM DR PIPE 18",H 10-15	160.000	37.98	6076.80
0165	550-1240	LF	STM DR PIPE 24",H 1-10	4386.000	41.20	180726.67
0170	550-1241	LF	STM DR PIPE 24",H 10-15	239.000	56.34	13465.26
0175	550-1300	LF	STM DR PIPE 30",H 1-10	2791.000	54.38	151785.19
0180	550-1360	LF	STM DR PIPE 36",H 1-10	638.000	68.48	43696.46
0185	550-3318	EA	SAFETY END SECTION 18",STD,4:1	1.000	678.28	678.28
0190	550-3324	EA	SAFETY END SECTION 24",STD,4:1	1.000	1186.48	1186.48
0195	550-4224	EA	FLARED END SECT 24 IN, ST DR	1.000	718.52	718.52
0200	550-4230	EA	FLARED END SECT 30 IN, ST DR	1.000	784.92	784.92
0205	550-4236	EA	FLARED END SECT 36 IN, ST DR	1.000	1201.06	1201.07
0210	603-2181	SY	STN DUMPED RIP RAP, TP 3, 18"	718.000	41.14	29541.75
0215	603-7000	SY	PLASTIC FILTER FABRIC	718.000	4.07	2924.00
0220	611-8040	EA	ADJUST DROP INLET TO GRADE	1.000	918.62	918.62
0225	611-8050	EA	ADJUST MANHOLE TO GRADE	1.000	894.01	894.01
0230	668-1100	EA	CATCH BASIN, GP 1	143.000	2317.34	331380.87
0235	668-1110	LF	CATCH BASIN, GP 1, ADDL DEPTH	191.000	179.62	34308.11
0240	668-2100	EA	DROP INLET, GP 1	26.000	1937.87	50384.87
0245	668-2105	EA	DROP INLET, GP 1, SPCL DES	1.000	2625.00	2625.00
0250	668-2110	LF	DROP INLET, GP 1, ADDL DEPTH	27.000	207.32	5597.82
0255	668-4300	EA	STORM SEW MANHOLE, TP 1	21.000	2052.94	43111.85
0260	668-4311	LF	ST SEW MANHOLE,TP 1,A DEP,CL 1	56.000	215.17	12050.07
0265	668-5000	EA	JUNCTION BOX	1.000	1936.36	1936.37
0270	163-0232	AC	TEMPORARY GRASSING	16.000	545.42	8726.82
0275	163-0240	TN	MULCH	400.000	174.83	69935.31
0280	163-0300	EA	CONSTRUCTION EXIT	2.000	1351.90	2703.80
0285	163-0501	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 1	3.000	491.31	1473.93
0290	163-0503	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 3	7.000	415.99	2911.98
0295	163-0520	LF	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	319.000	16.70	5329.46
0300	163-0528	LF	CONSTR AND REM FAB CK DAM -TP C SLT FN	2552.000	3.65	9339.20
0305	163-0529	LF	CNST/REM TEMP SED BAR OR BLD STRW CK DM	8771.000	3.19	28026.85
0310	163-0550	EA	CONS & REM INLET SEDIMENT TRAP	183.000	126.49	23148.86
0315	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	17144.000	0.42	7253.80
0320	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	11163.000	0.45	5077.38
0325	165-0041	LF	MAINT OF CHECK DAMS - ALL TYPES	1276.000	1.71	2183.16
0330	165-0071	LF	MAINT OF SEDIMENT BARRIER - BALED STRAW	4386.000	0.34	1498.83
0335	165-0085	EA	MAINT OF SILT CONTROL GATE, TP 1	3.000	157.21	471.63
0340	165-0087	EA	MAINT OF SILT CONTROL GATE, TP 3	7.000	101.31	709.18
0345	165-0101	EA	MAINT OF CONST EXIT	5.000	635.50	3177.52
0350	165-0105	EA	MAINT OF INLET SEDIMENT TRAP	183.000	31.94	5845.85
0355	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	2.000	230.63	461.27
0360	167-1500	MO	WATER QUALITY INSPECTIONS	19.000	396.30	7529.86
0365	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	34288.000	1.34	46153.36
0370	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	22327.000	2.77	61853.16
0375	700-6910	AC	PERMANENT GRASSING	32.000	937.39	29996.78
0380	700-7000	TN	AGRICULTURAL LIME	80.000	82.66	6612.84
0385	700-8000	TN	FERTILIZER MIXED GRADE	24.000	495.36	11888.82
0390	700-8100	LB	FERTILIZER NITROGEN CONTENT	1276.000	2.05	2627.82
0395	716-2000	SY	EROSION CONTROL MATS, SLOPES	11163.000	0.94	10580.85
0400	636-1020	SF	HWY SGN,TP1MAT,REFL SH TP3	200.000	15.31	3063.54
0405	636-1033	SF	HWY SIGNS, TP1MAT,REFL SH TP 9	500.000	18.03	9019.70
0420	636-2080	LF	GALV STEEL POSTS, TP 8	900.000	9.14	8231.89
0465	653-0120	EA	THERM PVT MARK, ARROW, TP 2	5.000	88.36	441.82

0474	653-0160	EA	THERM PVMT MARK, ARROW, TP 6	22.000	115.00	2530.00
0475	653-1704	LF	THERM SOLID TRAF STRIPE, 24", WH	500.000	5.84	2923.06
0480	653-0210	EA	THERM PVMT MARK, WORD , TP 1	10.000	106.97	1069.73
0490	653-2501	LM	THERMO SOLID TRAF ST, 5 IN, WH	7.500	1783.20	13374.03
0495	653-2502	LM	THERMO SOLID TRAF ST, 5 IN YE	2.300	1741.33	4005.07
0500	653-2804	LM	THERM SOLID TRAF STRIPE, 8", WH	1.500	9776.00	14664.00
0515	653-4501	GLM	THERMO SKIP TRAF ST, 5 IN, WHI	3.000	1045.48	3136.46
0530	654-1001	EA	RAISED PVMT MARKERS TP 1	75.000	3.99	299.44
0535	654-1003	EA	RAISED PVMT MARKERS TP 3	75.000	3.92	294.07
0550	615-1200	LF	DIRECTIONAL BORE - 752210	160.000	20.72	3315.20
0555	636-1041	SF	HWY SIGNS, TP 2MAT, REFL SH TP 9 TRAFFIC SIGNAL SIGNS	100.000	35.95	3595.50
0565	639-4004	EA	STRAIN POLE, TP IV	12.000	7119.77	85437.27
0570	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #1	1.000	8500.00	8500.00
0575	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #2	1.000	7940.00	7940.00
0580	647-1000	LS	TRAF SIGNAL INSTALLATION NO - SIGNAL #3	1.000	5170.00	5170.00
0594	647-2140	EA	PULL BOX, PB-4	3.000	1180.00	3540.00
0595	647-2160	EA	PULL BOX, PB-6	3.000	1268.87	3806.61
0600	647-2170	EA	PULL BOX, PB-7	1.000	1580.46	1580.46
0604	682-6222	LF	CONDUIT, NONMETL, TP 2, 2 IN	150.000	5.64	846.00
0605	682-6233	LF	CONDUIT, NONMETL, TP 3, 2 IN	1150.000	5.25	6037.50
0609	682-9010	EA	SVC POLE RISER	3.000	2387.00	7161.00
0610	682-9028	EA	ELECTRICAL COMM BOX, TP 5	1.000	750.00	750.00
0614	682-9950	LF	DIRECTIONAL BORE - 752210	100.000	10.00	1000.00
0619	935-1117	LF	OUT PLNT FBR OPT CBL, LOOSE TB, SM, 96 FBR	1300.000	4.74	6162.00
0620	935-1511	LF	OUT PLNT FBR OPT CBL, DROP, SM, 6 FBR	300.000	2.98	894.00
0634	935-3207	EA	FBR OPTIC CLOSURE, AERL (SLD), 96 FBR	3.000	1500.00	4500.00
0635	935-3602	EA	FBR. OP. CLOS., FDC PRE-TERM., TYP. A, 6	3.000	523.00	1569.00
0640	935-4010	EA	FIBER OPTIC SPLICE, FUSION	288.000	45.29	13043.52
0645	935-5030	EA	FIBER OPTIC CONNECTORS, SM	130.000	50.00	6500.00
0650	935-5050	EA	FIBER OPTIC PATCH CORD, SM	120.000	100.00	12000.00
0655	935-5060	EA	FIBER OPTIC SNOWSHOE	3.000	129.00	387.00
0660	935-8000	LS	TESTING	1.000	1501.00	1501.00
0665	937-8000	LS	TESTING	1.000	987.50	987.50
0670	939-2305	EA	FIELD SWITCH, TYPE C	3.000	2533.33	7599.99
0675	939-4030	EA	TYPE C CABINET	1.000	3500.00	3500.00
0680	939-8000	LS	TESTING	1.000	1300.00	1300.00
0685	681-4300	EA	LT STD, 30' MH, 6' ARM	73.000	3110.00	227030.00
0690	681-6246	EA	LUMINAIRE, TP 2, 250W, HP SODIUM	73.000	1391.00	101543.00
0695	682-1406	LF	CABLE, TP XHHW, AWG NO 6	29200.000	1.20	35040.00
0700	682-6221	LF	CONDUIT, NONMETL, TP 2, 1 1/2"	27600.000	3.15	86940.00
0705	682-6222	LF	CONDUIT, NONMETL, TP 2, 2 IN	1800.000	7.23	13014.00
0710	682-9000	LS	MAIN SVC PICK UP POINT POINT A	1.000	8500.00	8500.00
0715	682-9000	LS	MAIN SVC PICK UP POINT POINT B	1.000	8500.00	8500.00
0720	682-9021	EA	ELEC JCT BX, CONC GRD MOUNTED	96.000	1588.20	152467.66
0725	682-9950	LF	DIRECTIONAL BORE - 2 INCH	8400.000	12.00	100800.00
0730	950-3540	EA	INSTALL TELECOM FACIL, PRECAST MANHOLE TP 1 CL 1	2.000	33000.00	66000.00

ITEM TOTAL

15350478.86

INFLATED ITEM TOTAL

15350478.86

TOTALS FOR JOB 752210

ESTIMATED COST:	15350478.86
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	15350478.86

PROJ. NO.

P.I. NO.

DATE

752200	
10/15/2015	

CALL NO.

9/29/2009

INDEX (TYPE)

DATE

INDEX

REG. UNLEADED

DIESEL

LIQUID AC

Oct-15	\$ 2.155
	\$ 2.485
	\$ 429.00

Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>**LIQUID AC ADJUSTMENTS**

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)

308107.8

\$

308,107.80

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

1197

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	7490	5.0%	374.5
9.5 mm SP		5.0%	0
25 mm SP	6900	5.0%	345
19 mm SP	9550	5.0%	477.5
	23940		1197

BITUMINOUS TACK COAT

Price Adjustment (PA)

\$ 14,316.99

\$

14,316.99

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

55.62155694

Bitum Tack

Gals	gals/ton	tons
12950	232.8234	55.6215569

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)

0

\$

-

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 686.40

Monthly Asphalt Cement Price month project let (APL)

\$ 429.00

Total Monthly Tonnage of asphalt cement (TMT)

0

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.	0	0.20	0	232.8234	0
Double Surf. Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0

TOTAL LIQUID AC ADJUSTMENT

\$

322,424.79

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 10/1/2015

Project: N/A

Revised:

County: Rockdale

PI: 0013163

Description: Sigman Road Widening - Phase 1

Project Termini: East of Lester Road to Irwin Bridge Road - South Side R/W

Existing ROW: Varies

Parcels: 9

Required ROW:

Land and Improvements \$387,352.50

Proximity Damage \$0.00

Consequential Damage \$20,000.00

Cost to Cures \$0.00

Trade Fixtures \$4,000.00

Improvements \$2,500.00

Valuation Services \$25,000.00

Legal Services \$81,075.00

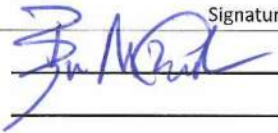
Relocation \$18,000.00

Demolition \$3,000.00

Administrative \$80,500.00

TOTAL ESTIMATED COSTS \$594,927.50

TOTAL ESTIMATED COSTS (ROUNDED) \$595,000.00

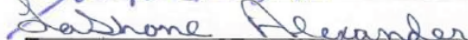
Preparation Credits	Hours	Signature
Benjamin M. Garland Jr.		

Prepared By:



CG#: GAL# 270880 (DATE) 10-9-15

Approved By:



CG#: 286999 10/15/2015 (DATE)

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 10/1/2015

Project: N/A

Revised:

County: Rockdale

PI: 0012886

Description: Sigman Road Multi-Use Path - Phase 1

Project Termini: East of Lester Road to Irwin Bridge Road - North Side of Sigman Road

Existing ROW: Varies

Parcels: 11

Required ROW:

Land and Improvements \$144,931.50

Proximity Damage \$0.00

Consequential Damage \$0.00

Cost to Cures \$0.00

Trade Fixtures \$2,000.00

Improvements \$5,000.00

Valuation Services \$23,437.50

Legal Services \$82,425.00


Relocation \$22,000.00

Demolition \$1,500.00

Administrative \$94,500.00

TOTAL ESTIMATED COSTS \$368,794.00

TOTAL ESTIMATED COSTS (ROUNDED) \$369,000.00

Preparation Credits	Hours	Signature
Benjamin M. Garland Jr.		

Prepared By:



CG#: GAL #270880 (DATE) 10-9-15

Approved By:



CG#: 286999 10/15/2015 (DATE)

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 7/15/2015
Revised:

Project: N/A
County: Rockdale
PI: 0013594

Description: Sigman Road Improvements Alternative 2 - Phase 2
Project Termini: Rockbridge Road to SR 138

Parcels: 54
Existing ROW: Varies
Required ROW: Varies

Land and Improvements \$2,835,787.50

Proximity Damage \$140,000.00

Consequential Damage \$74,000.00

Cost to Cures \$60,000.00

Trade Fixtures \$85,000.00

Improvements \$225,000.00

Valuation Services \$117,187.50

Legal Services \$373,950.00

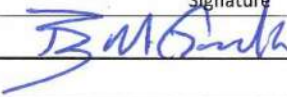
Relocation \$188,000.00

Demolition \$46,500.00

Administrative \$458,000.00

TOTAL ESTIMATED COSTS \$4,019,425.00

TOTAL ESTIMATED COSTS (ROUNDED) \$4,020,000.00

Preparation Credits	Hours	Signature
Benjamin M. Garland Jr.	4	

Prepared By:

Approved By:


Daphne Alexander

CG#:

GM 270880

CG#: 286999

08/15/2015 (DATE)

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 7/15/2015

Project: N/A

Revised:

County: Rockdale

PI: 752210

Description: Sigman Road Alternative 2 - Phase 3

Project Termini: SR 138 to Dogwood Connector

Existing ROW: Varies

Parcels: 35

Required ROW:

Land and Improvements \$2,012,850.00

Proximity Damage \$0.00

Consequential Damage \$50,000.00

Cost to Cures \$0.00

Trade Fixtures \$25,000.00

Improvements \$50,000.00

Valuation Services \$83,750.00

Legal Services \$248,625.00


Relocation \$70,000.00

Demolition \$81,000.00

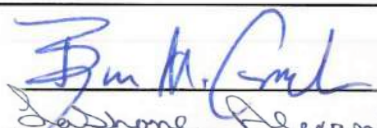
Administrative \$297,500.00

TOTAL ESTIMATED COSTS \$2,793,725.00

TOTAL ESTIMATED COSTS (ROUNDED) \$2,794,000.00

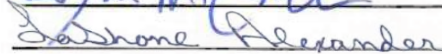
Preparation Credits	Hours	Signature
Benjamin M. Garland Jr.	4	

Prepared By:



CG#: 646 270880 7/15-15

Approved By:



CG#: 286999 08/15/2015 (DATE)

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

Karla Poshedly

From: Woodard, Wade [wwoodard@dot.ga.gov]
Sent: Thursday, March 26, 2015 3:58 PM
To: Karla Poshedly 0013594
Subject: RE: P.I. Nos. 0013163, 752200 & 752210 (Rockdale County) - Sigman Road

↑
includes 0012886

Hi Karla,

I have reviewed your utilities cost estimate for the above projects. I approve your utilities cost estimate and if you need further assistance please contact be below.

Thanks

*Wade Woodard
Georgia Department Of Transportation
District Seven Metro Utilities Engineer
Serving : DeKalb & Rockdale Counties
Phone: 770-986-1117
Fax: 770-986-1411
wwoodard@dot.ga.gov*

From: Karla Poshedly [<mailto:kposhedly@maai.net>]
Sent: Wednesday, March 25, 2015 5:12 PM
To: Woodard, Wade
Cc: 'L. N. Manchi'
Subject: P.I. Nos. 0013163, 752200 & 752210 (Rockdale County) - Sigman Road

Hi Wade,

You previously approved the utility estimates for this project on July 25, 2014, however the project number has changed and the last project number (752210) was left off of the email for approval. Attached is the Utility estimates. Could you send another email of approval with all the right P.I. Nos. so that I can include it in the attachments of the concept report.

Thanks,
Karla

Karla Poshedly
Moreland Altobelli Associates, Inc
2211 Beaver Run Road, Suite 190
Norcross, Georgia 30071
Phone: 770-263-5945
Fax: 770-263-5954
Cell: 770-363-3572
kposhedly@maai.net

Effective April 27th, Moreland Altobelli Associates' Norcross office will be moving to:

2450 Commerce Ave Ste 100
Duluth, GA 30096-8910

Sigman Road Utility Estimate - P.I. No. 0013163

Camden Industrial Pkwy to Irwin Bridge Road - 1.3 miles

6/4/14

Utility	Quantity	Unit	Cost per unit	Cost
Georgia Power Transmission Conyers -Cornish 115KV	1	Structure	\$150,000.00	\$150,000.00
Georgia Power Transmission Conyers -Solo Cup 46KV	1	Mono pole Struct	\$150,000.00	<u>\$150,000.00</u>
				\$300,000.00
Georgia Power Distribution Includes lighting, transformers drops, guying, switches Zig-Zags, shortspans, road crossings for feeds, etc.	1.3	Mile	\$1,272,660.00	\$1,654,458.00
Total				\$1,954,458.00

Sigman Road Utility Estimate - P.I. No. 0013594

Irwin Bridge Road to SR 138/Walnut Grove Road - 2.9 miles

6/4/14

Utility	Quantity	Unit	Cost per unit	Cost
Georgia Power Transmission	1	Mono pole Struct	\$200,000.00	<u>\$200,000.00</u>
Conyers -Solo Cup 46KV				
Includes new easement				\$200,000.00
Georgia Power Distribution	2.9	Mile	\$1,272,660.00	\$3,690,714.00
Includes lighting, transformers drops, guying, switches Zig-Zags, shortspans, road crossings for feeds, etc.				
Total				\$3,890,714.00

Sigman Road Utility Estimate - P.I. No. 752210

SR 138/Walnut Grove Road to Dogwood Connector - 2.3 miles

6/4/14

Utility	Quantity	Unit	Cost per unit	Cost
Georgia Power Transmission Porterdale -Oxford 46KV	1	Mono pole Struct	\$150,000.00	<u>\$150,000.00</u>
				\$150,000.00
Williams /Transco Pipeline Possibly 4 natural Gas Mains	1	Pipeline Crossing	\$30,000.00	\$30,000.00
Georgia Power Distribution These poles have multiple Circuits- Require bigger poles	2.3	Mile	\$2,121,524.00	4,879,505.20
Includes lighting, transformers drops, guying, switches Zig-Zags, shortspans, road crossings for feeds, etc.				
Snapping Shoals EMC Single circuit pole line	0.7	Mile	\$1,272,660.00	\$890,862.00
Includes lighting, transformers drops, guying, switches Zig-Zags, shortspans, road crossings for feeds, etc.				
Total				\$5,950,367.20

Attachment 4

Crash Summaries

Summary of Crash, Injury and Fatality Rates for Sigman Road*

East of Lester Road to Irwin Bridge Road: Principal Arterial (1.3 miles)									
Year	No. of Crashes	No. of Injuries	No. of Fatalities	Crash Rate	Statewide Average Crash Rate	Injury Rate	Statewide Average Injury Rate	Fatality Rate	Statewide Average Fatality Rate
2010	29	10	0	338	347	117	86	0.00	1.21
2011	53	14	0	726	355	192	82	0.00	1.20
2012	35	12	0	479	396	164	89	0.00	1.15
Irwin Bridge Road to SR 138: Principal Arterial (2.9 miles)									
Year	No. of Crashes	No. of Injuries	No. of Fatalities	Crash Rate	Statewide Average Crash Rate	Injury Rate	Statewide Average Injury Rate	Fatality Rate	Statewide Average Fatality Rate
2010	61	19	0	336	347	105	86	0.00	1.21
2011	76	18	1	384	355	91	82	5.05	1.20
2012	77	14	0	389	396	71	89	0.00	1.15
SR 138 to Dogwood Connector: Principal Arterial (2.3 miles)									
Year	No. of Crashes	No. of Injuries	No. of Fatalities	Crash Rate	Statewide Average Crash Rate	Injury Rate	Statewide Average Injury Rate	Fatality Rate	Statewide Average Fatality Rate
2010	74	20	0	493	347	133	86	0.00	1.21
2011	75	17	0	576	355	131	82	0.00	1.20
2012	67	15	0	515	396	115	89	0.00	1.15

***Bolded rates represent rates that exceed the Statewide Average.**

**Summary of Type of Crashes for Sigman Road
East of Lester Road to Irwin Bridge Road: Principal Arterial (1.3 miles)**

Year	Angle	Rear-end	Head-on	Sideswipe	Hit an Object	Totals
2010	6	12	2	4	5	29
2011	12	22	4	3	12	53
2012	6	19	0	1	9	35
Totals	24 (20.5%)	53 (45.3%)	6 (5.1%)	8 (6.9%)	26 (22.2%)	117

**Summary of Type of Crashes for Sigman Road
Irwin Bridge Road to SR 138: Principal Arterial (2.9 miles)**

Year	Angle	Rear-end	Head-on	Sideswipe	Hit an Object	Totals
2010	12	38	1	3	7	61
2011	27	36	1	9	3	76
2012	14	39	3	14	7	77
Totals	53 (24.8%)	113 (52.8%)	5 (2.3%)	26 (12.2%)	17 (7.9%)	214

**Summary of Type of Crashes for Sigman Road
SR 138 to Dogwood Connector: Principal Arterial (2.3 miles)**

Year	Angle	Rear-end	Head-on	Sideswipe	Hit an Object	Totals
2010	12	51	1	3	7	74
2011	16	51	1	4	3	75
2012	10	49	0	2	6	67
Totals	38 (17.6)	151 (69.9%)	2 (0.9%)	9 (4.2%)	16 (7.4%)	216

Attachment 5

Traffic Diagrams

Department of Transportation State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE STP00-9335-00(002), Rockdale County
STP00-9335-00(003), Rockdale County
P. I. # 0013163, # 752200, # 752210

OFFICE Planning

DATE November 12, 2014

FROM Cynthia L. VanDyke, State Transportation Planning Administrator

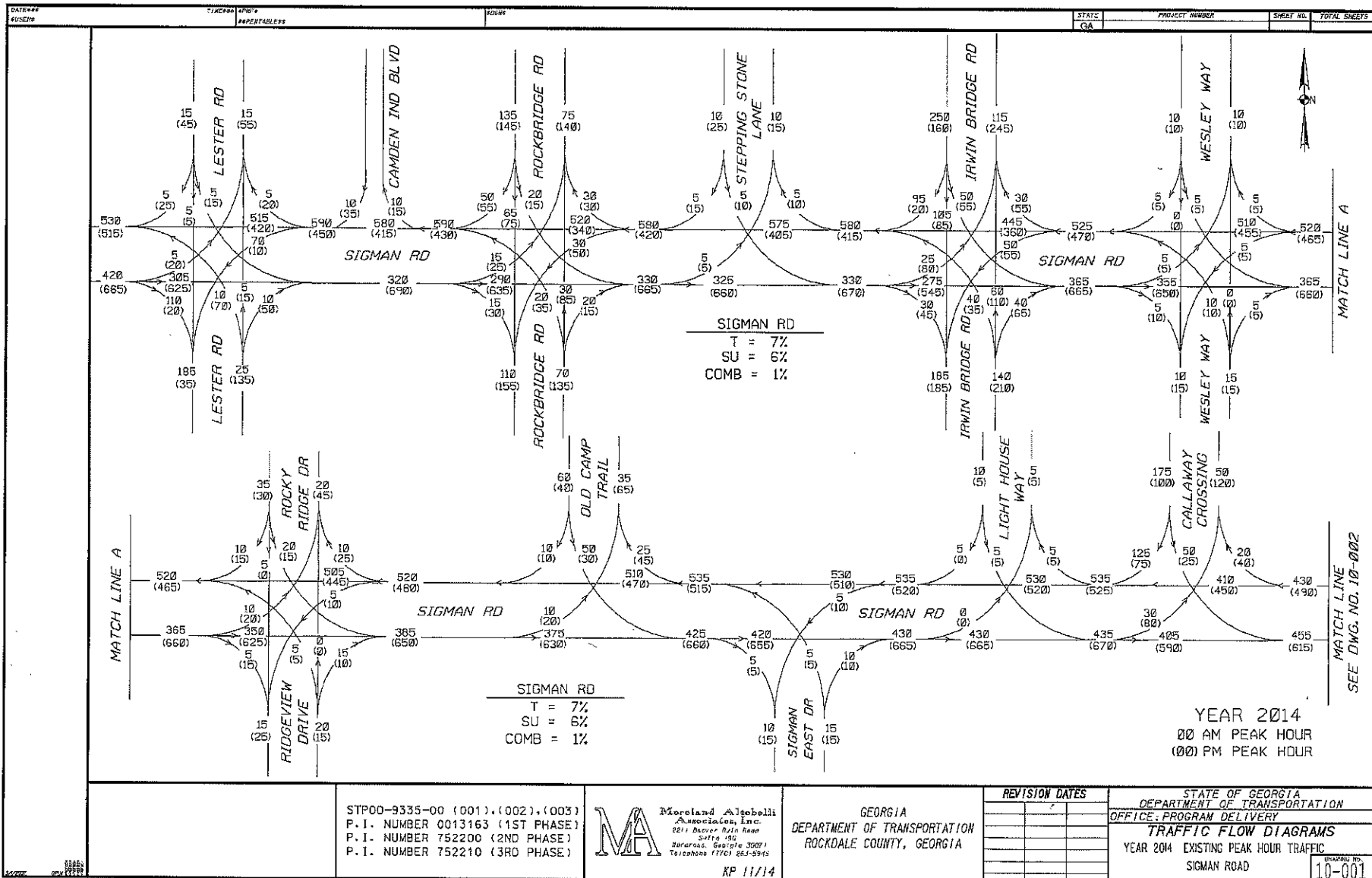
TO Albert Shelby, State Program Delivery Design Engineer
Attention: Xavier James and Albert Shelby

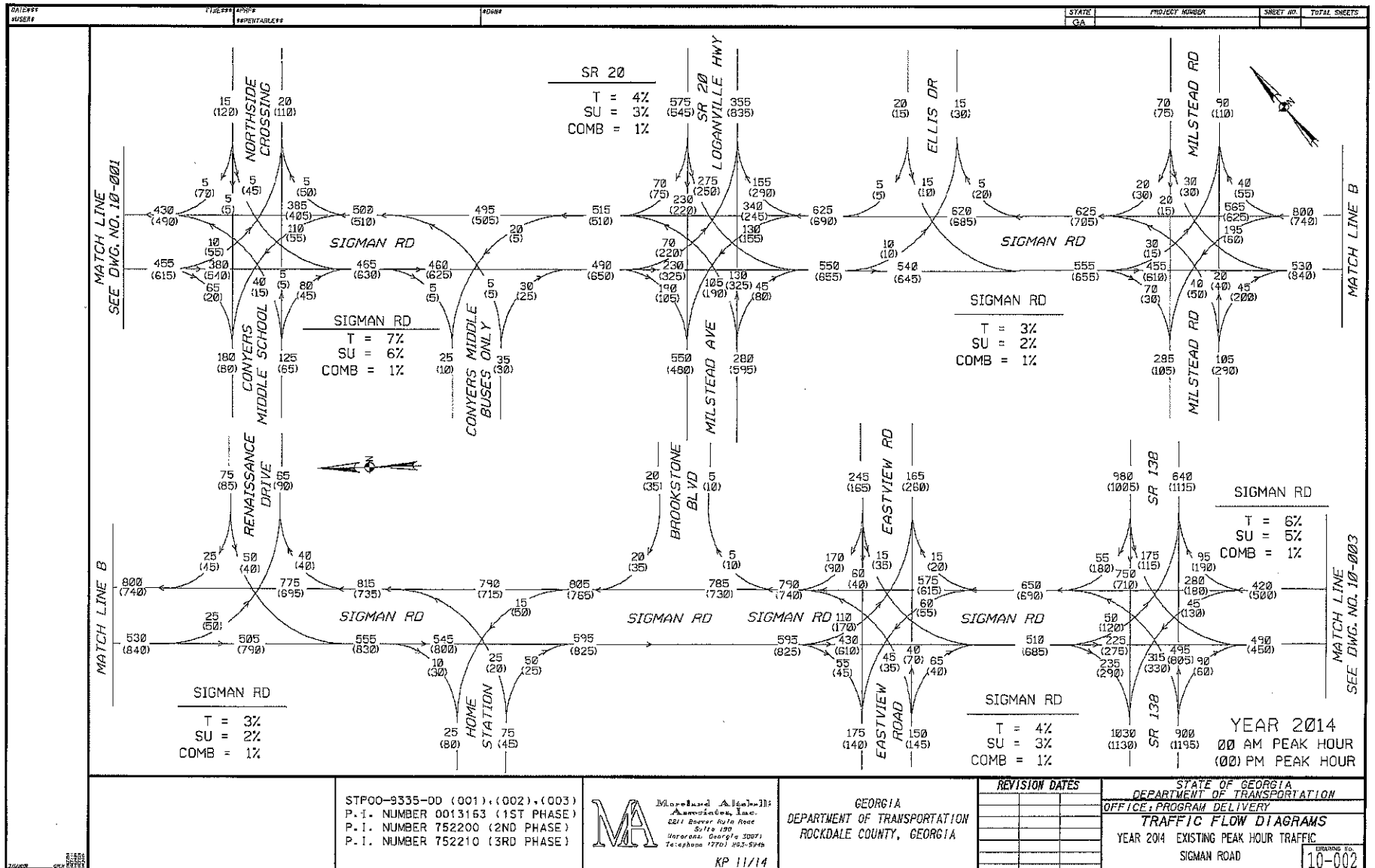
SUBJECT **Reviewed** Design Traffic for; ***CR 435/SIGMAN RD FM E OF LESTER TO E OF CR 442/IRWIN BRDG RD; SR 20/CR 435/SIGMAN RD FM CR 442/IRWIN BRIDGE RD TO SR 138; SIGMAN RD FM OLD COVINGTON NORTH TO SR 20/138 (EAST LEG)***

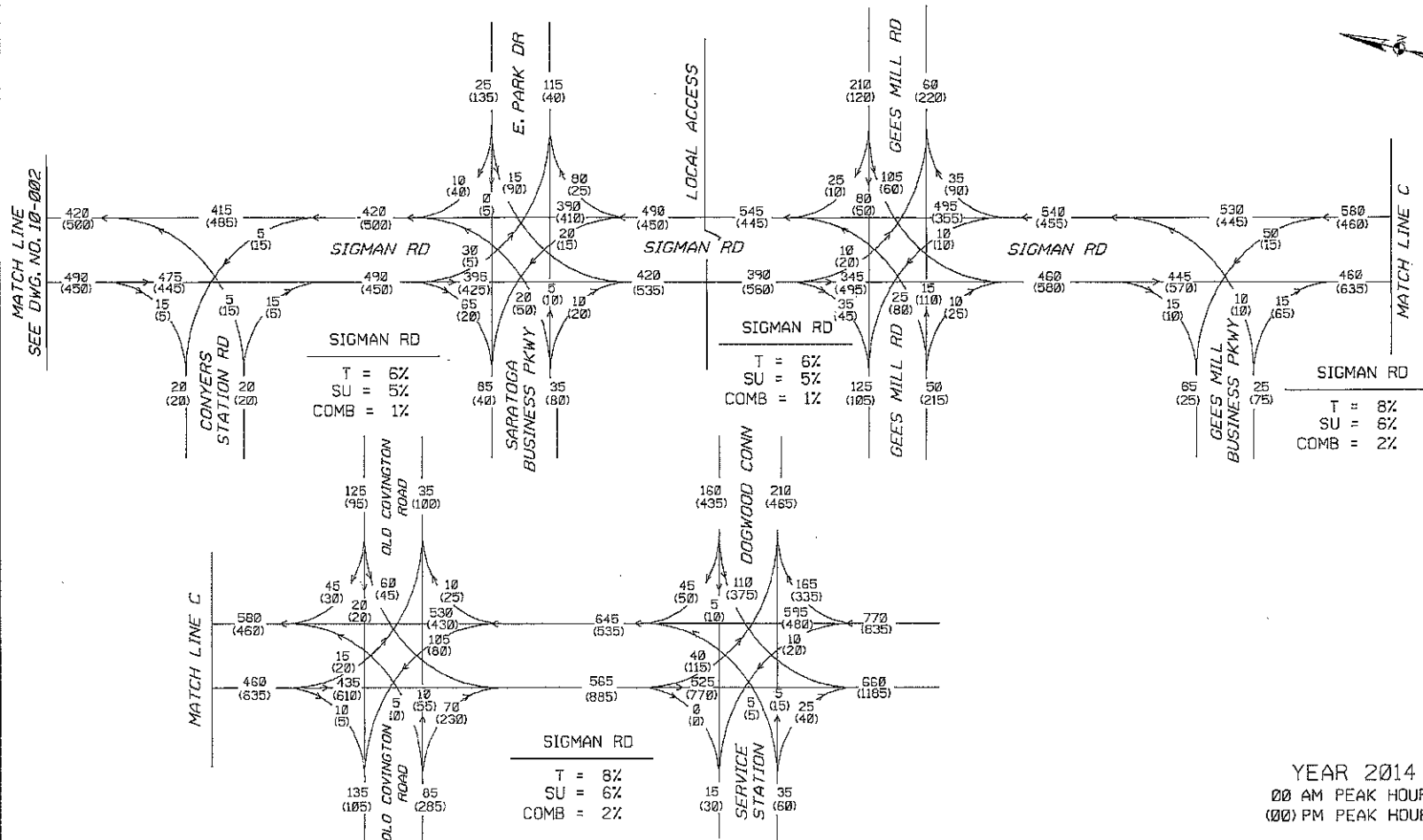
As per your request, we reviewed the consultant's Design Traffic for the above project.

The Design Traffic is approved based on the information furnished. Any questions concerning this review should be addressed to Ms. Leslie R. Woods at e-mail lwoods2@dot.ga.gov or phone (404) 631-1773.

CLV/lrw







YEAR 2014
00 AM PEAK HOUR
(00) PM PEAK HOUR

STP00-9335-00 (001), (002), (003)
P.I. NUMBER 0013163 (1ST PHASE)
P.I. NUMBER 752200 (2ND PHASE)
P.I. NUMBER 752210 (3RD PHASE)

MA Maryland Alkalath
2811 Beaver Run Road
Suite 100
Horseheads, Georgia 30091
Telephone: (770) 203-5945

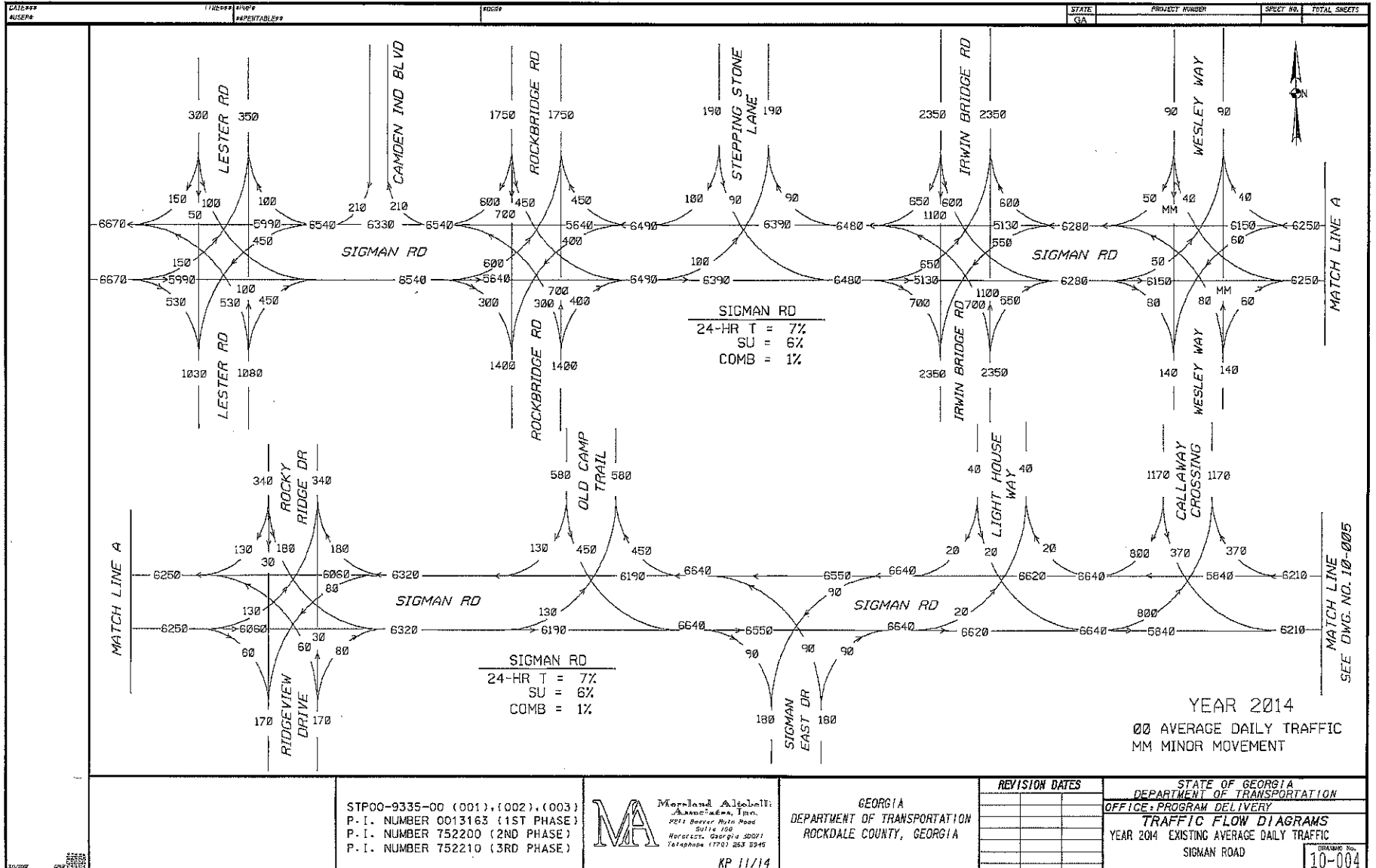
GEORGIA
DEPARTMENT OF TRANSPORTATION
ROCKDALE COUNTY, GEORGIA

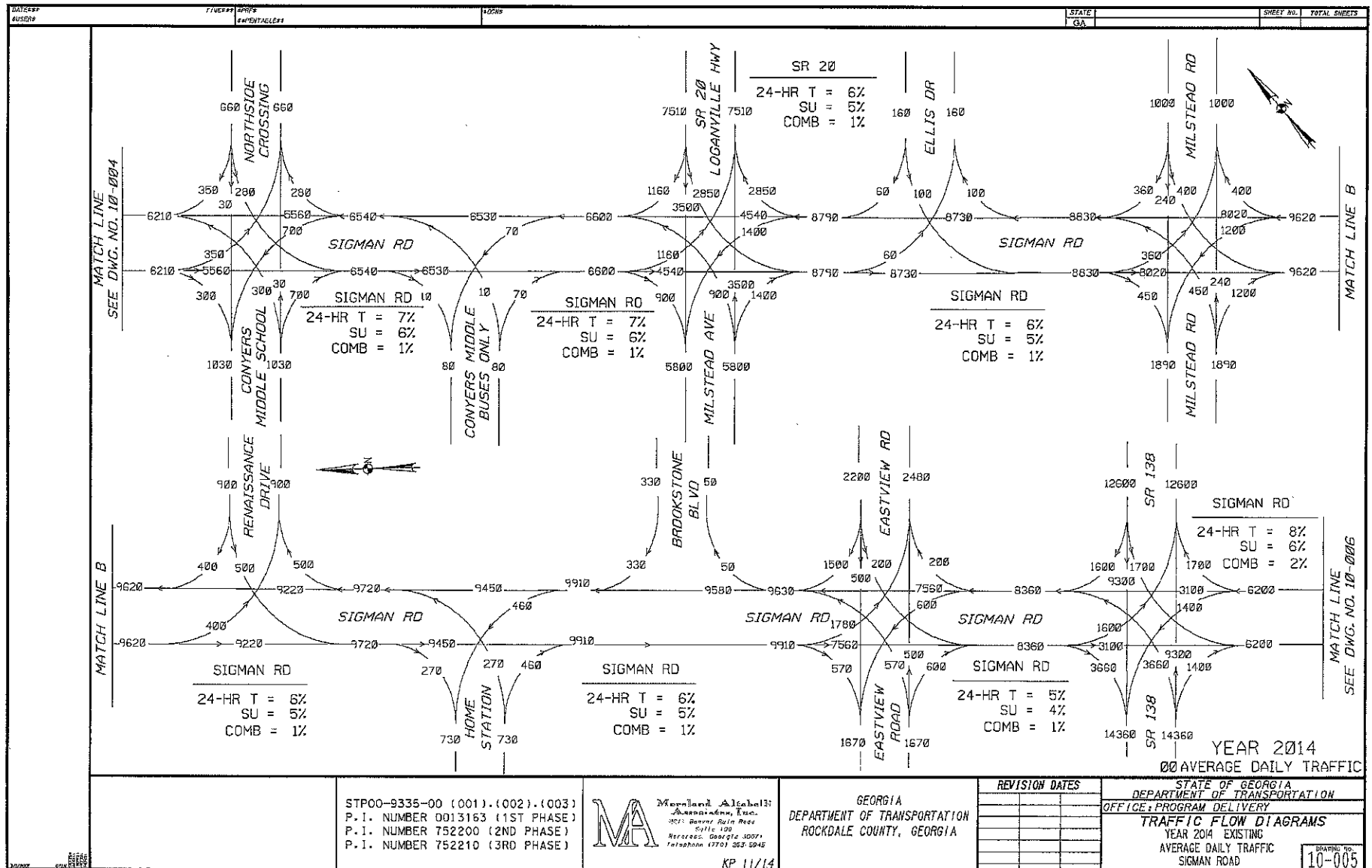
KP 11/14

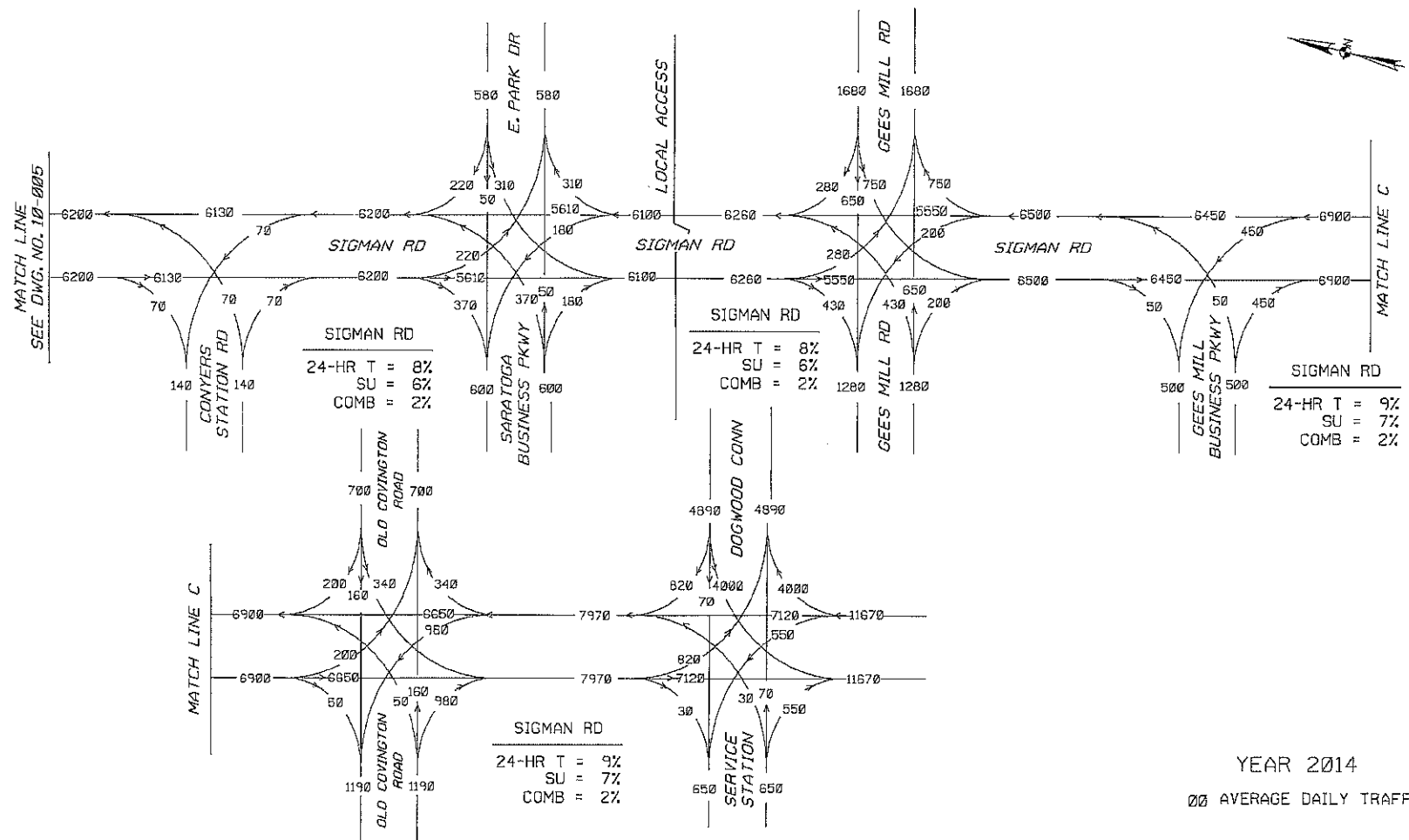
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
YEAR 2014 EXISTING PEAK HOUR TRAFFIC
SIGMAN ROAD

DRAWING NO.
10-003







YEAR 2014
00 AVERAGE DAILY TRAFFIC

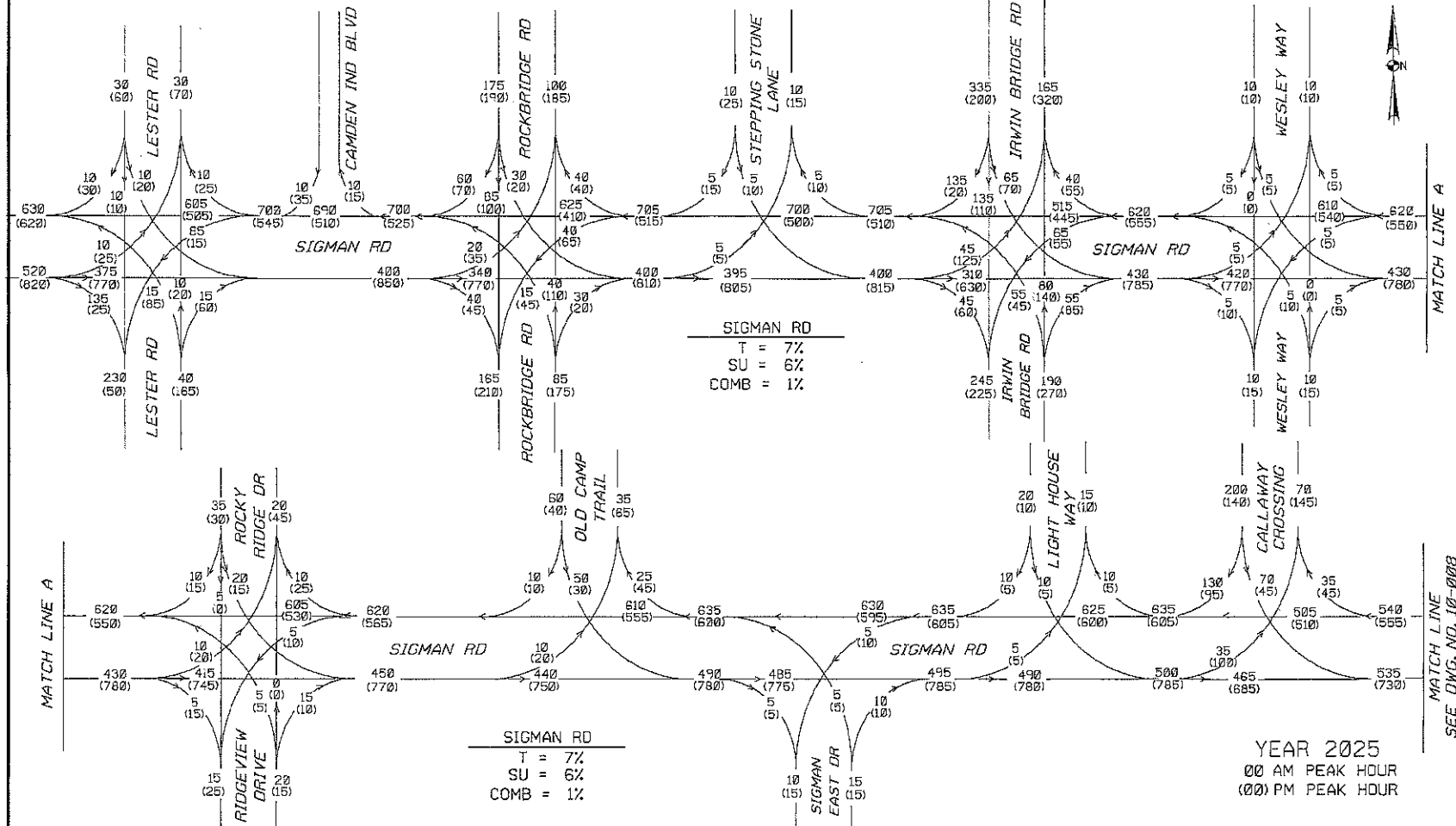
STP00-9335-00 (001),(002),(003)
P.I. NUMBER 0013163 (1ST PHASE)
P.I. NUMBER 752200 (2ND PHASE)
P.I. NUMBER 752210 (3RD PHASE)



GEORGIA
DEPARTMENT OF TRANSPORTATION
ROCKDALE COUNTY, GEORGIA

REVISION	DATE	DESCRIPTION

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
YEAR 2014 EXISTING AVERAGE DAILY TRAFFIC
SIGMAN ROAD
DRAWING NO. 10-006



STP00-9335-00 (001), (002), (003)
 P.I. NUMBER 0013163 (1ST PHASE)
 P.I. NUMBER 752200 (2ND PHASE)
 P.I. NUMBER 752210 (3RD PHASE)

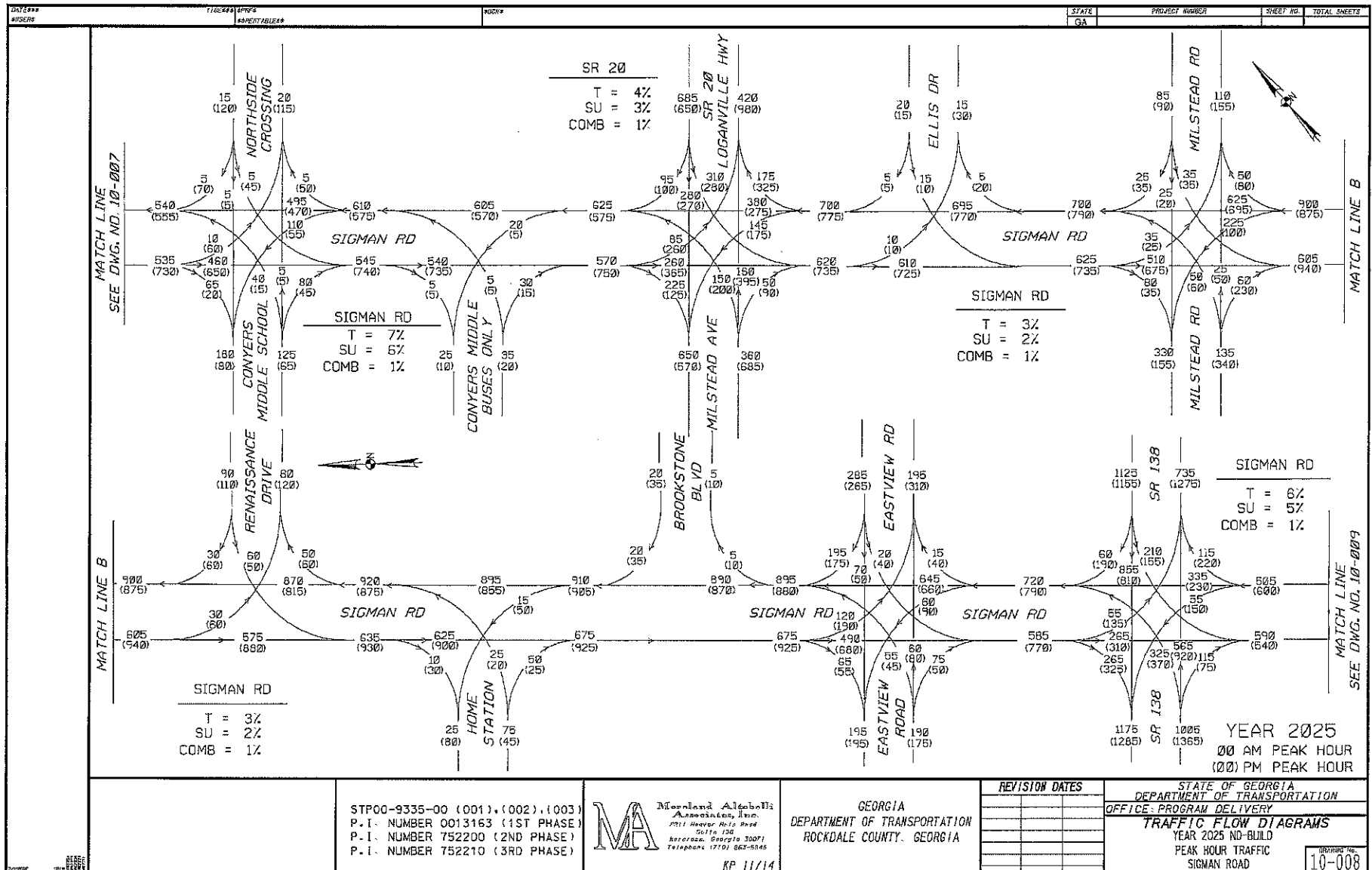


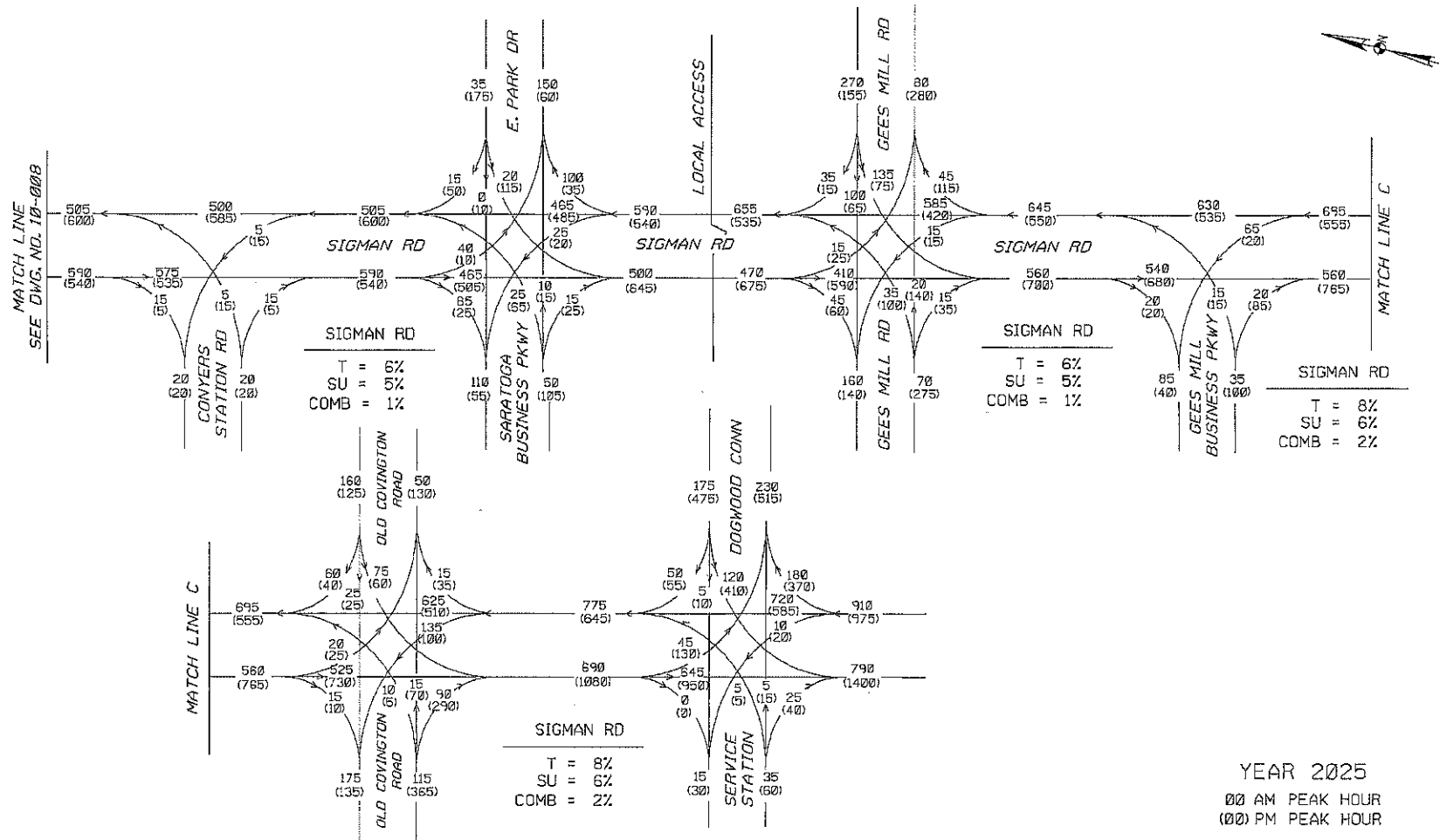
GEORGIA
 DEPARTMENT OF TRANSPORTATION
 ROCKDALE COUNTY, GEORGIA

REVISION DATES

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
 YEAR 2025 NO-BUILD
 PEAK HOUR TRAFFIC
 SIGMAN ROAD

DRAWING NO.
10-007





STP00-9335-00 (001), (002), (003)
P.I. NUMBER 0013163 (1ST PHASE)
P.I. NUMBER 752200 (2ND PHASE)
P.I. NUMBER 752210 (3RD PHASE)



**Monument Altabelli
Associates, Inc.**
2211 Beaver Hill Road
Suite 100
Norcross, Georgia 30071
Telephone (770) 363-5145

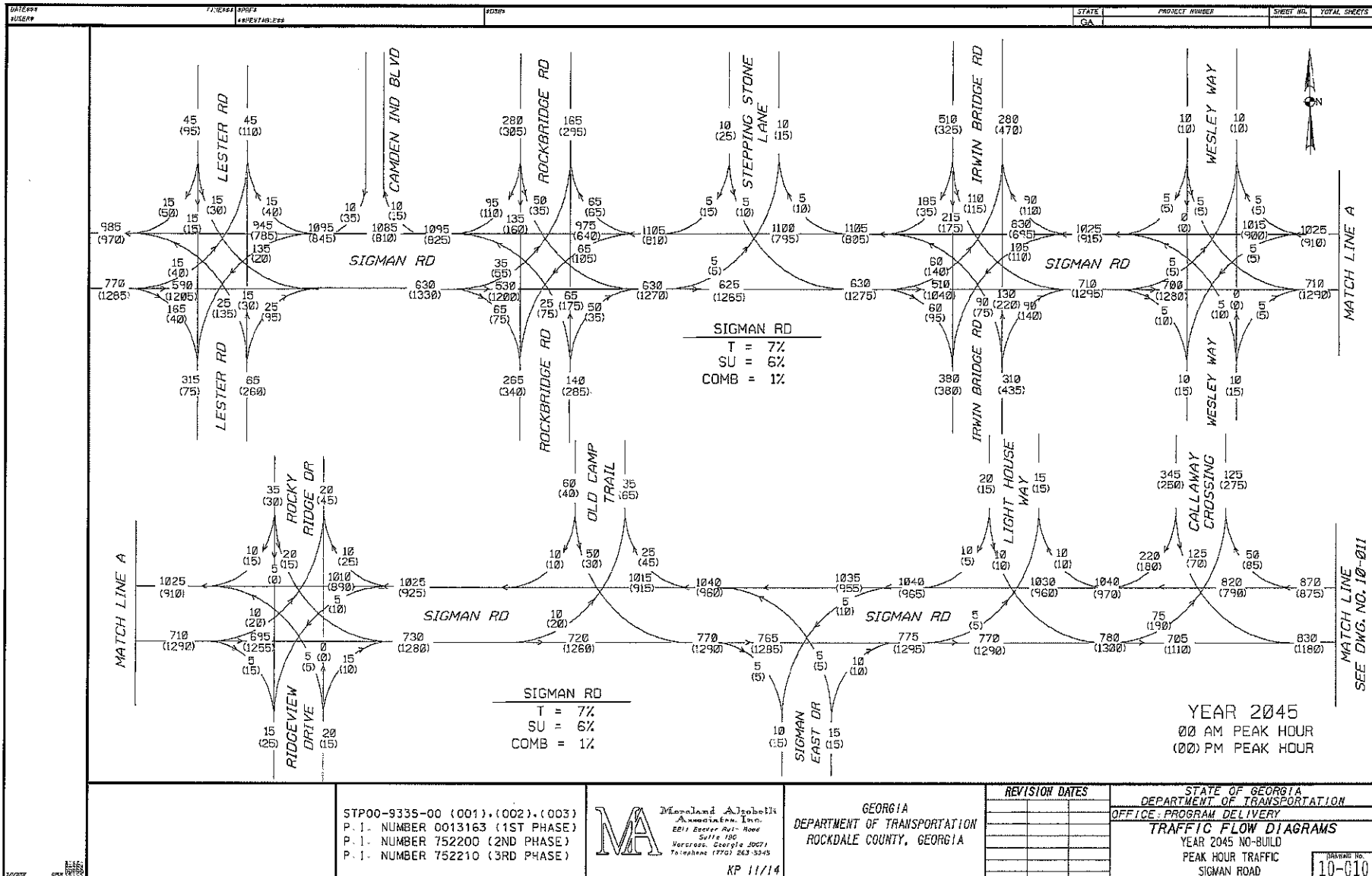
GEORGIA
DEPARTMENT OF TRANSPORTATION
ROCKDALE COUNTY, GEORGIA

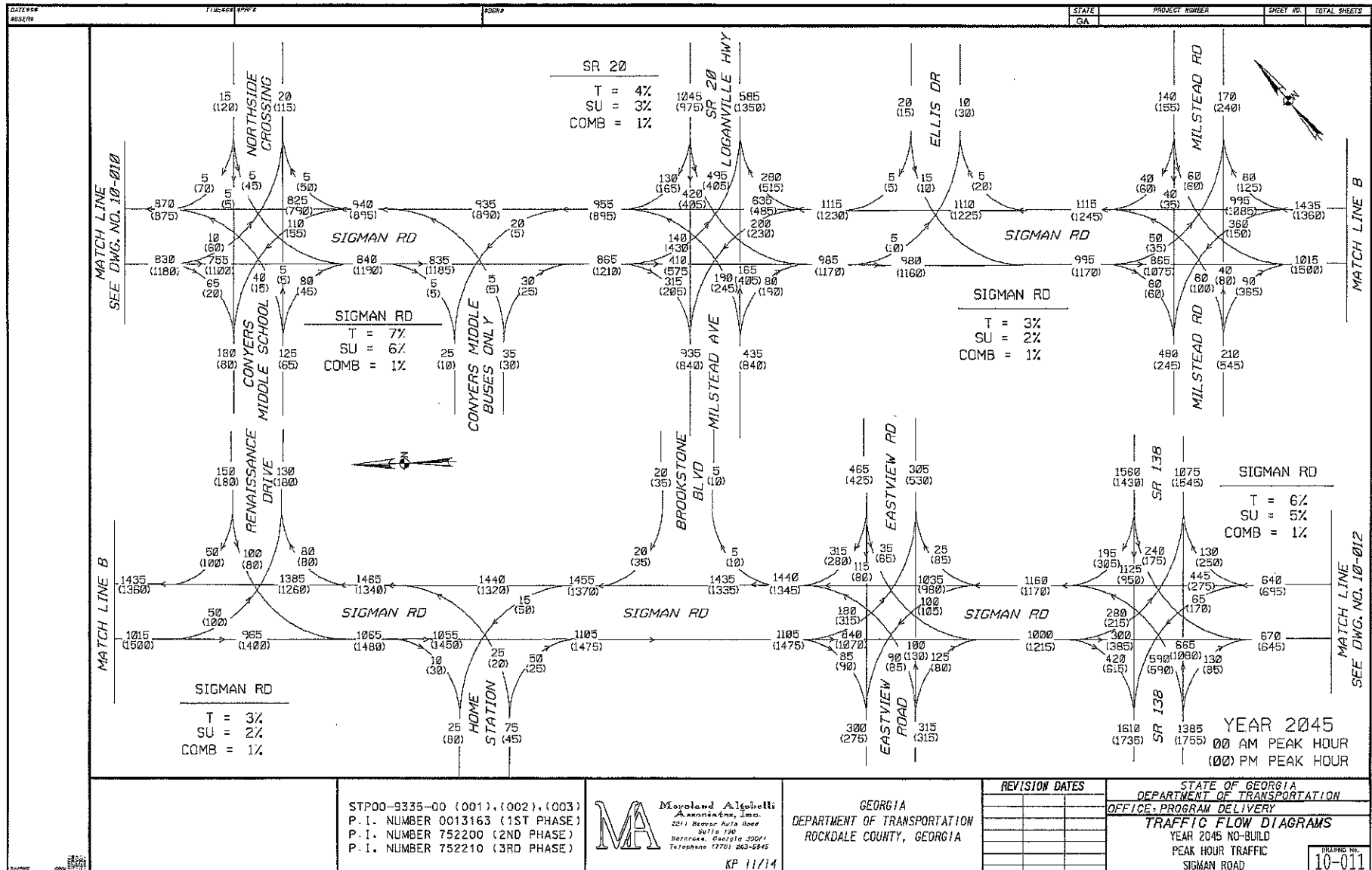
KP 11/14

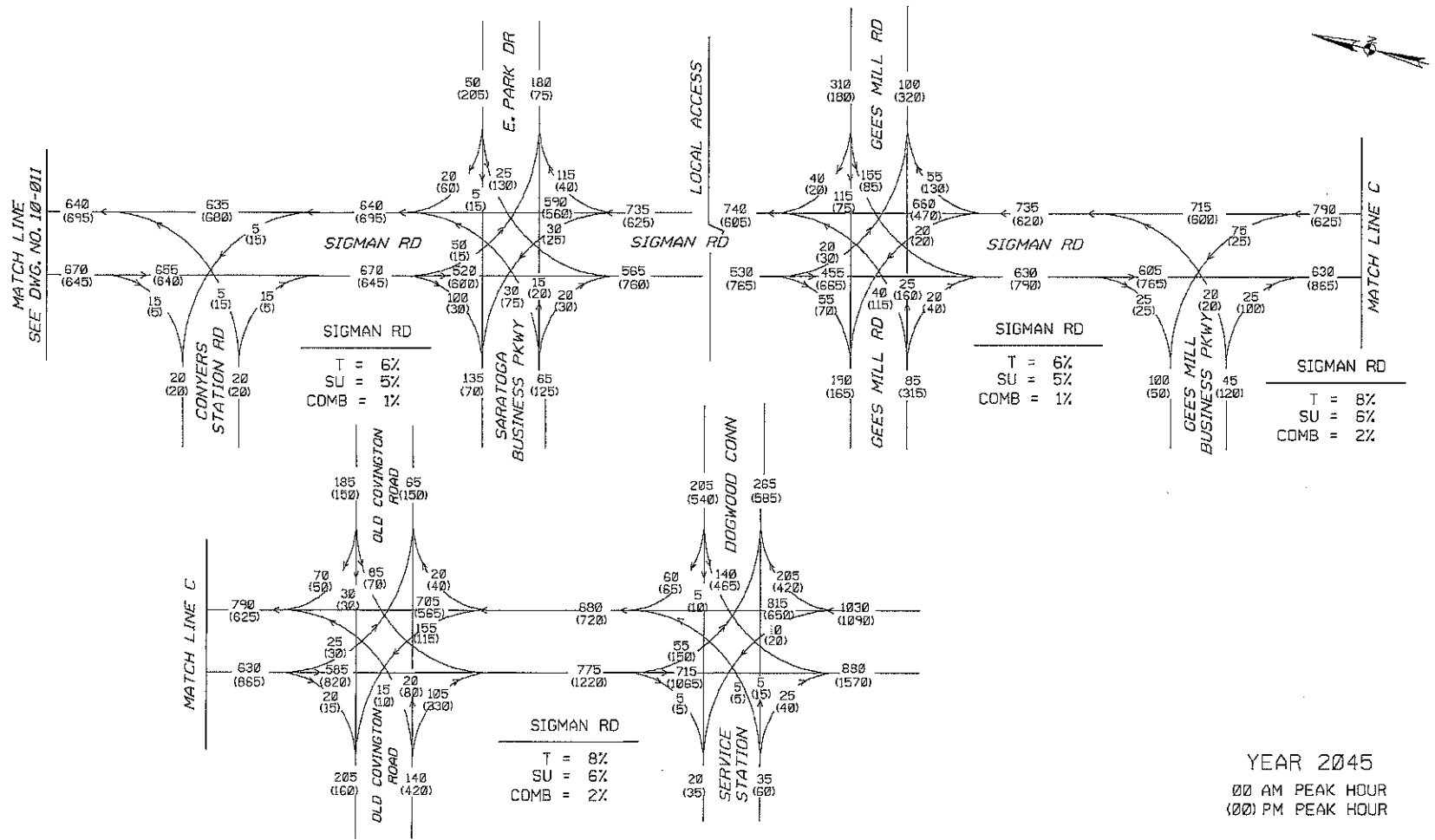
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STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
YEAR 2025 NO-BUILD
PEAK HOUR TRAFFIC
SIGMAN ROAD

DRAWING No.
10-009







STP00-9335-00 (001), (002), (003)
P. I. NUMBER 0013163 (1ST PHASE)
P. I. NUMBER 752200 (2ND PHASE)
P. I. NUMBER 752210 (3RD PHASE)



Marietta, Georgia
Rockdale County, Georgia
2011 Beaver Drive, Suite 100
Marietta, Georgia 30067
Telephone 770/241-5945

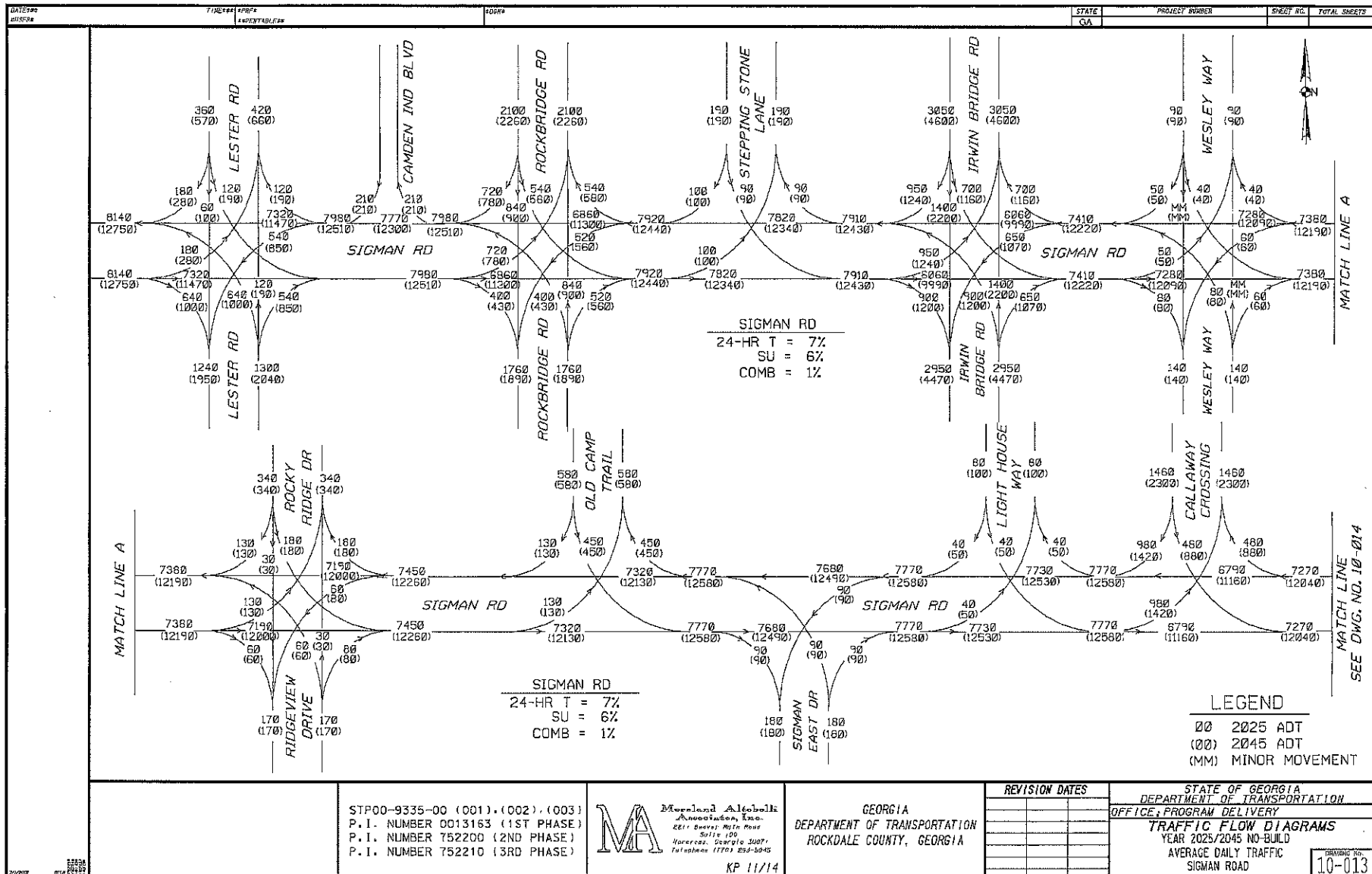
GEORGIA
DEPARTMENT OF TRANSPORTATION
ROCKDALE COUNTY, GEORGIA

REVISION DATES

1	2	3	4	5	6	7	8	9	10

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
YEAR 2045 NO-BUILD
PEAK HOUR TRAFFIC
SIGMAN ROAD

10-012



STP00-9335-00 (001), (002), (003)
 P.I. NUMBER 0013163 (1ST PHASE)
 P.I. NUMBER 752200 (2ND PHASE)
 P.I. NUMBER 752210 (3RD PHASE)



Macdonald Alcoholic
 Association, Inc.
 2211 Duval St. N.W.
 Suite 100
 Marietta, Georgia 30067
 Telephone (770) 593-3045

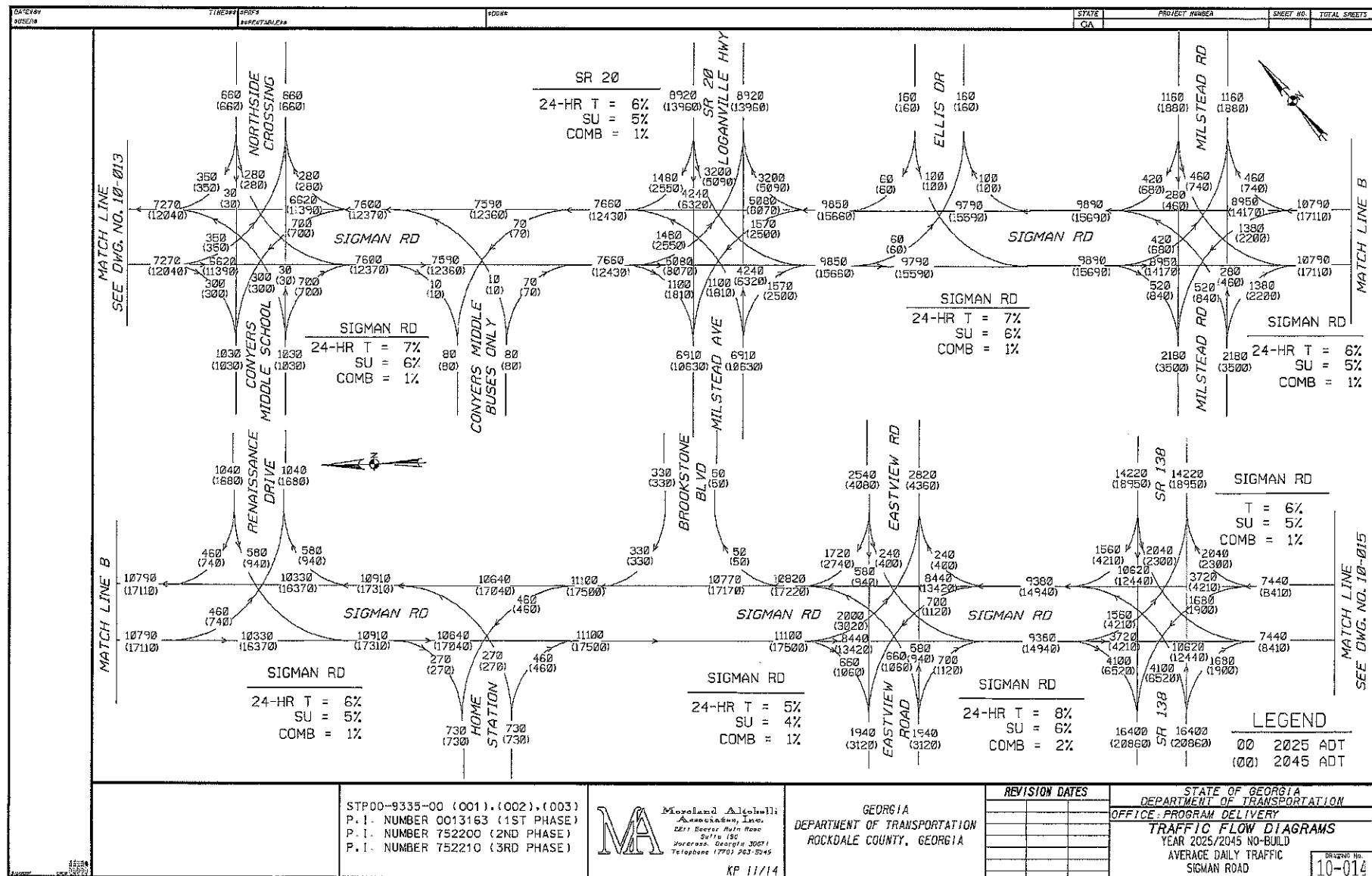
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 DEPARTMENT OF TRANSPORTATION
 ROCKDALE COUNTY, GEORGIA

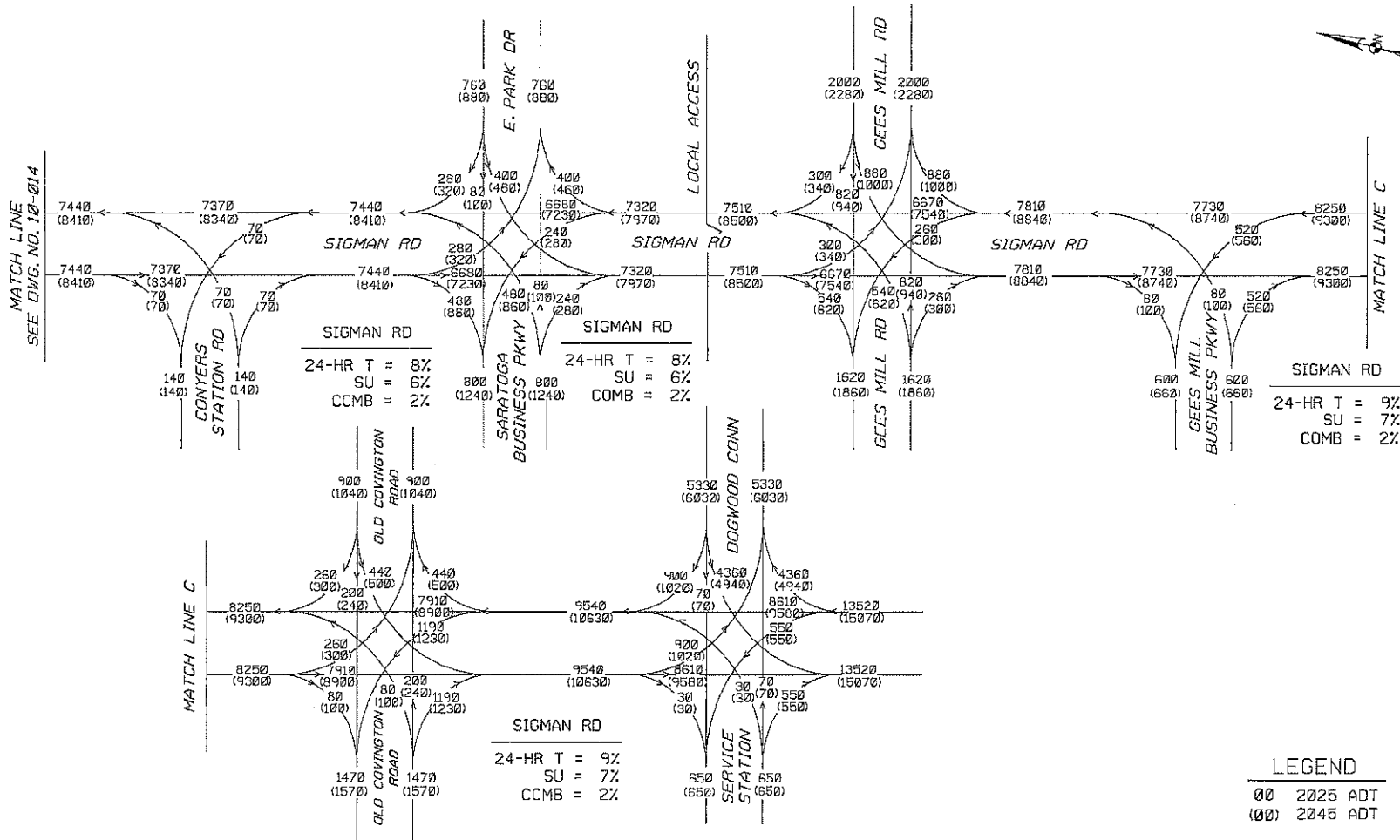
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 DEPARTMENT OF TRANSPORTATION
 OFFICE, PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
 YEAR 2025/2045 NO-BUILD
 AVERAGE DAILY TRAFFIC
 SIGMAN ROAD

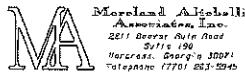
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 P.I. NUMBER 752210 (3RD PHASE)

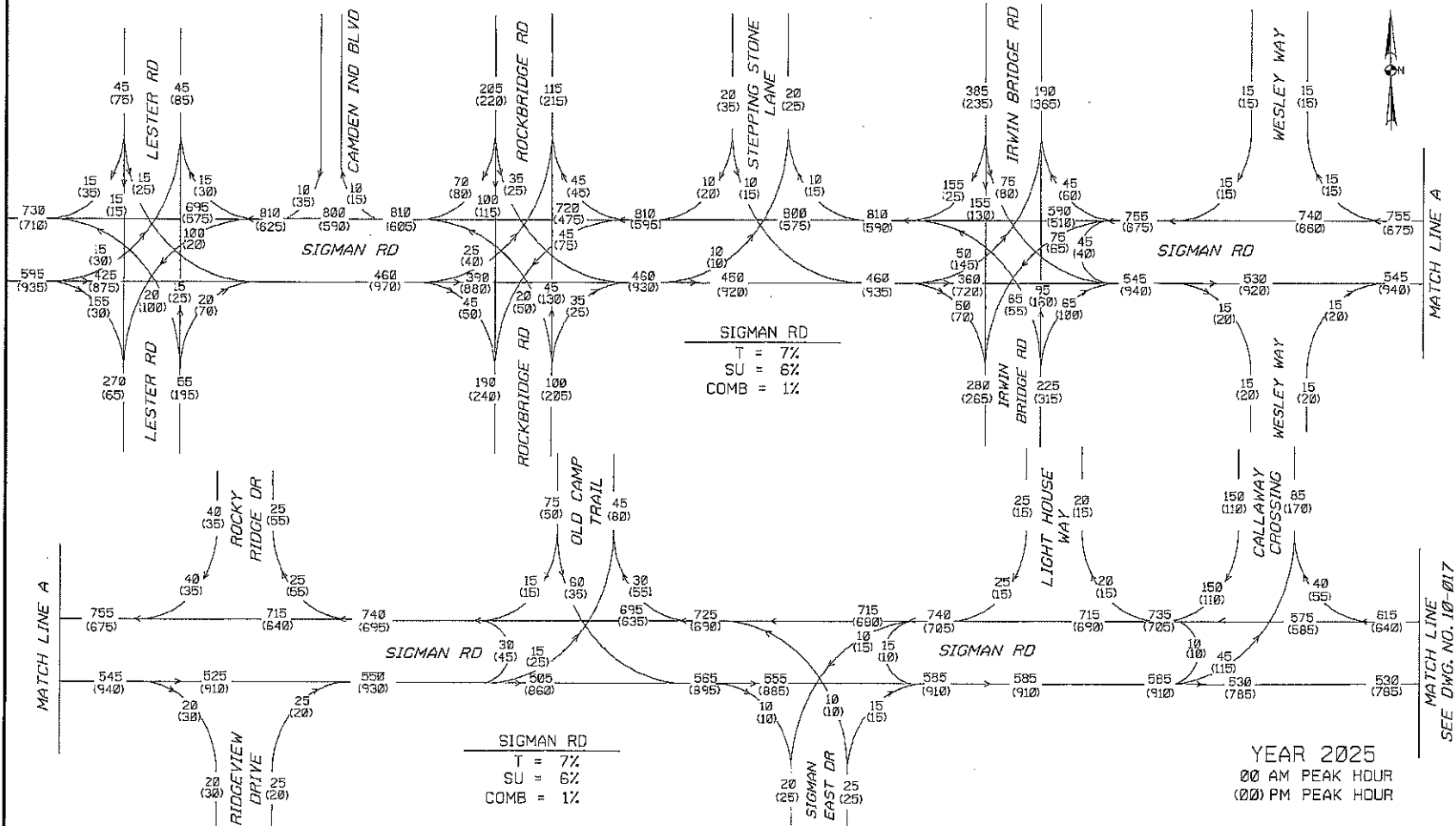


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 ROCKDALE COUNTY, GEORGIA

REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
 YEAR 2025/2045 NO-BUILD
 AVERAGE DAILY TRAFFIC
 SIGMAN ROAD

DRAWING NO. 10-015



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P.I. NUMBER 752210 (3RD PHASE)



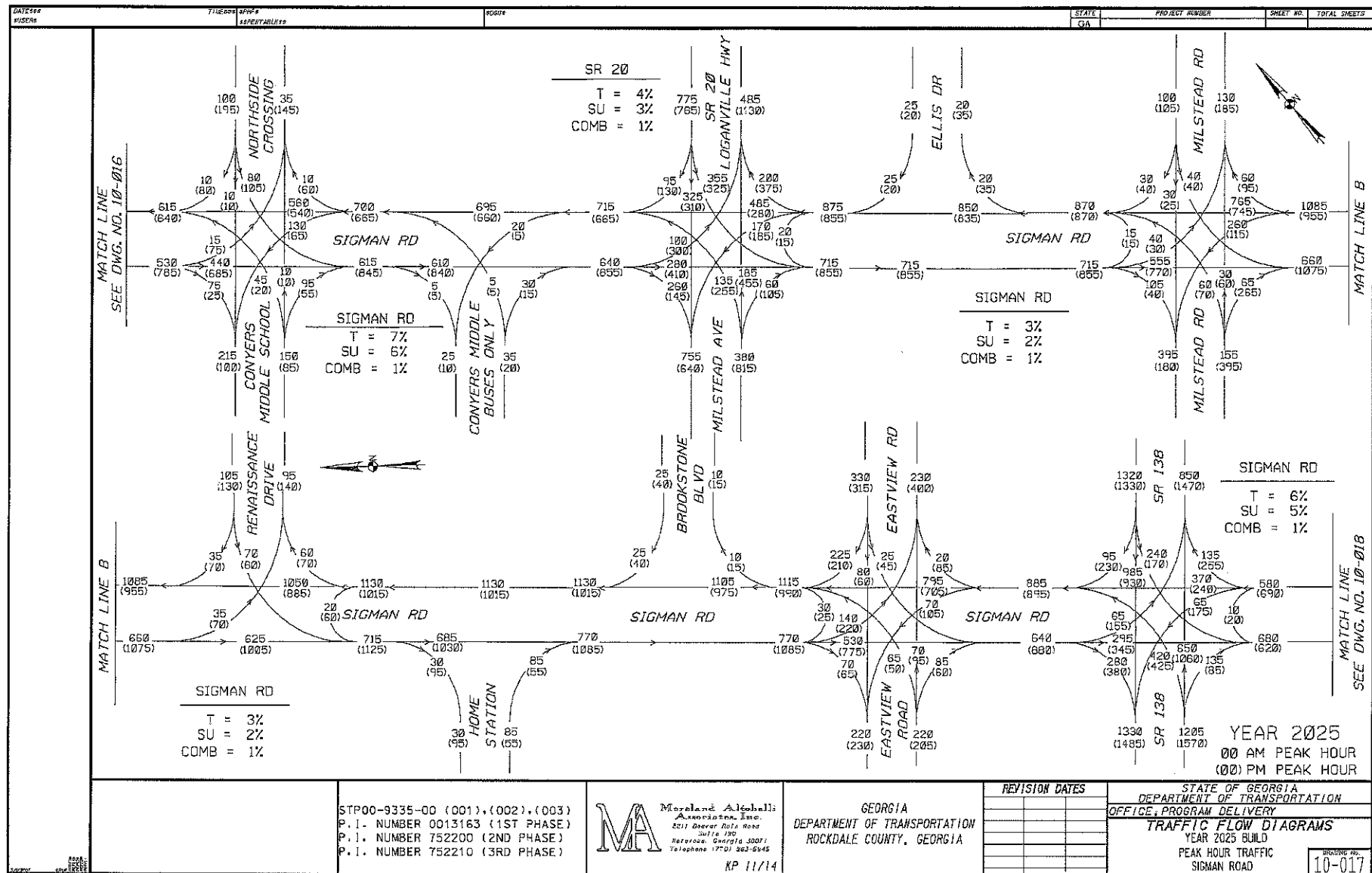
Macdonald Jacobs
Associates, Inc.
2611 Everette Road
Suite 100
Norcross, Georgia 30071
Telephone (770) 863-5945

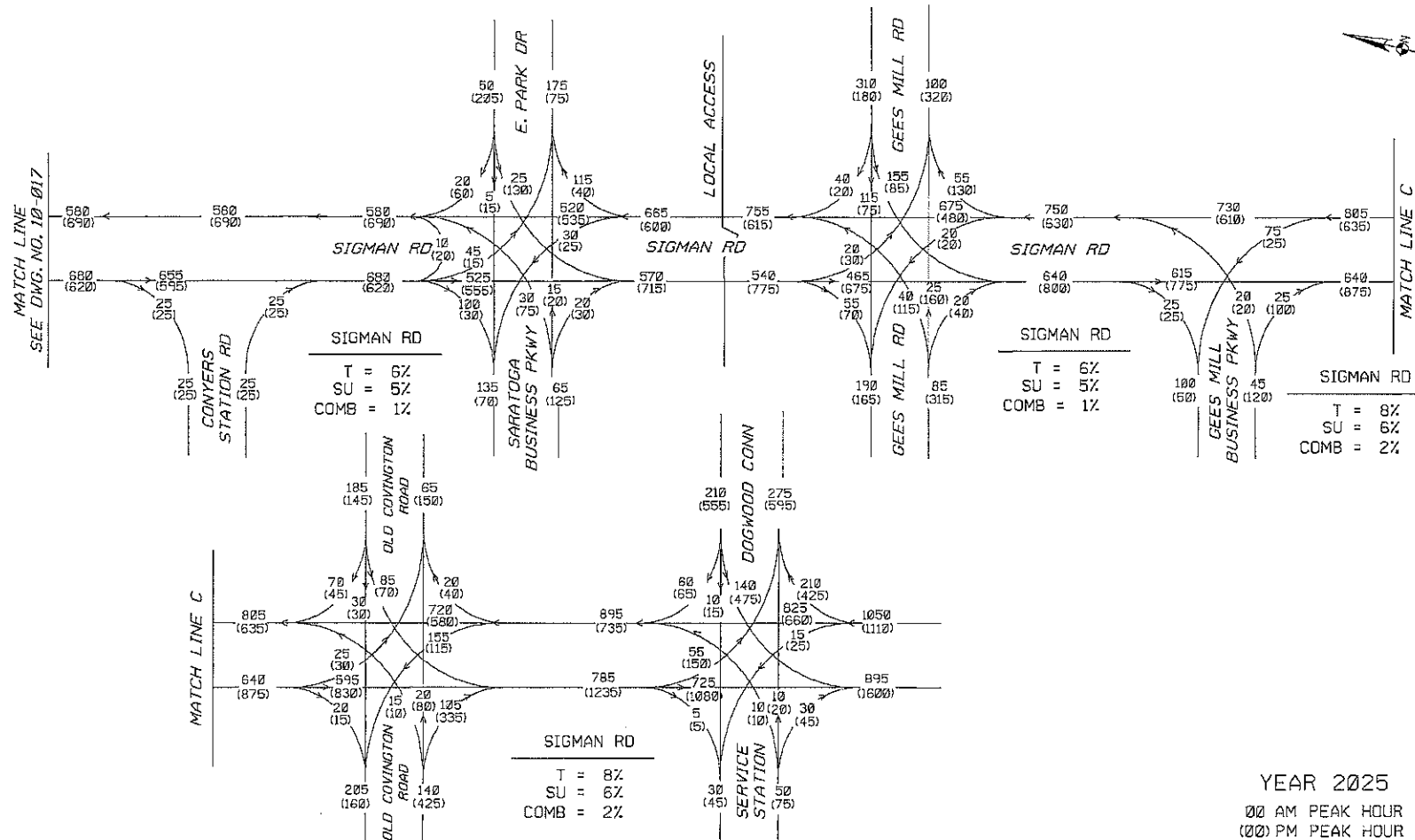
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ROCKDALE COUNTY, GEORGIA

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
YEAR 2025 BUILD
PEAK HOUR TRAFFIC
SIGMAN ROAD

10-016





YEAR 2025
 00 AM PEAK HOUR
 (00) PM PEAK HOUR

STP00-9335-00 (001), (002), (003)
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 P.I. NUMBER 752200 (2ND PHASE)
 P.I. NUMBER 752210 (3RD PHASE)

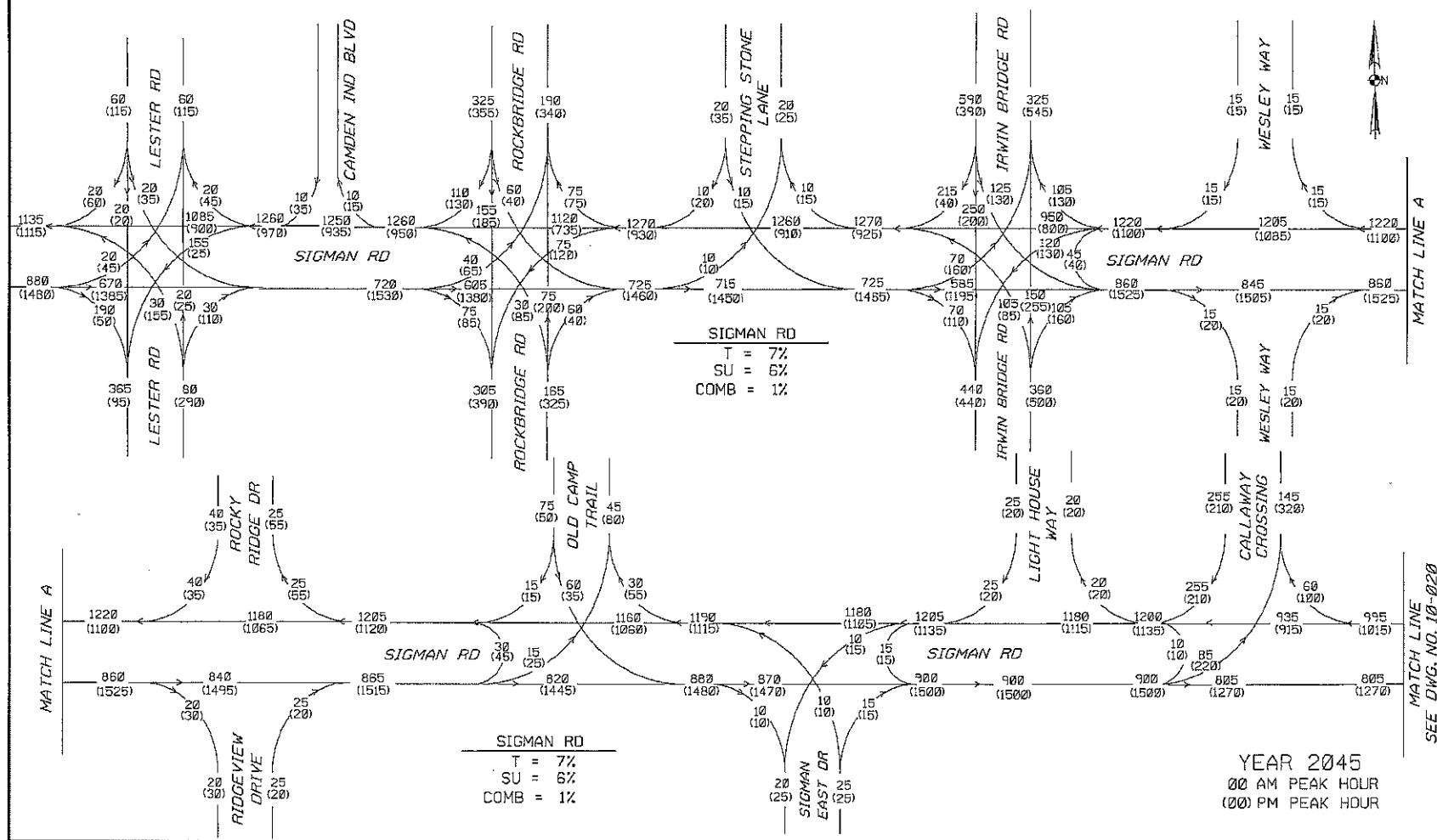
MA Meraland Alipelli Associates, Inc.
 2011 Beaver Hills Road
 Suite 100
 Marietta, Georgia 30067
 Telephone: 478/263-9948

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 ROCKDALE COUNTY, GEORGIA

REVISION DATES	

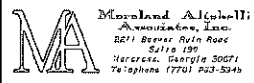
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 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
 YEAR 2025 BUILD
 PEAK HOUR TRAFFIC
 SIGMAN ROAD

10-018



YEAR 2045
00 AM PEAK HOUR
00 PM PEAK HOUR

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P.I. NUMBER 752200 (2ND PHASE)
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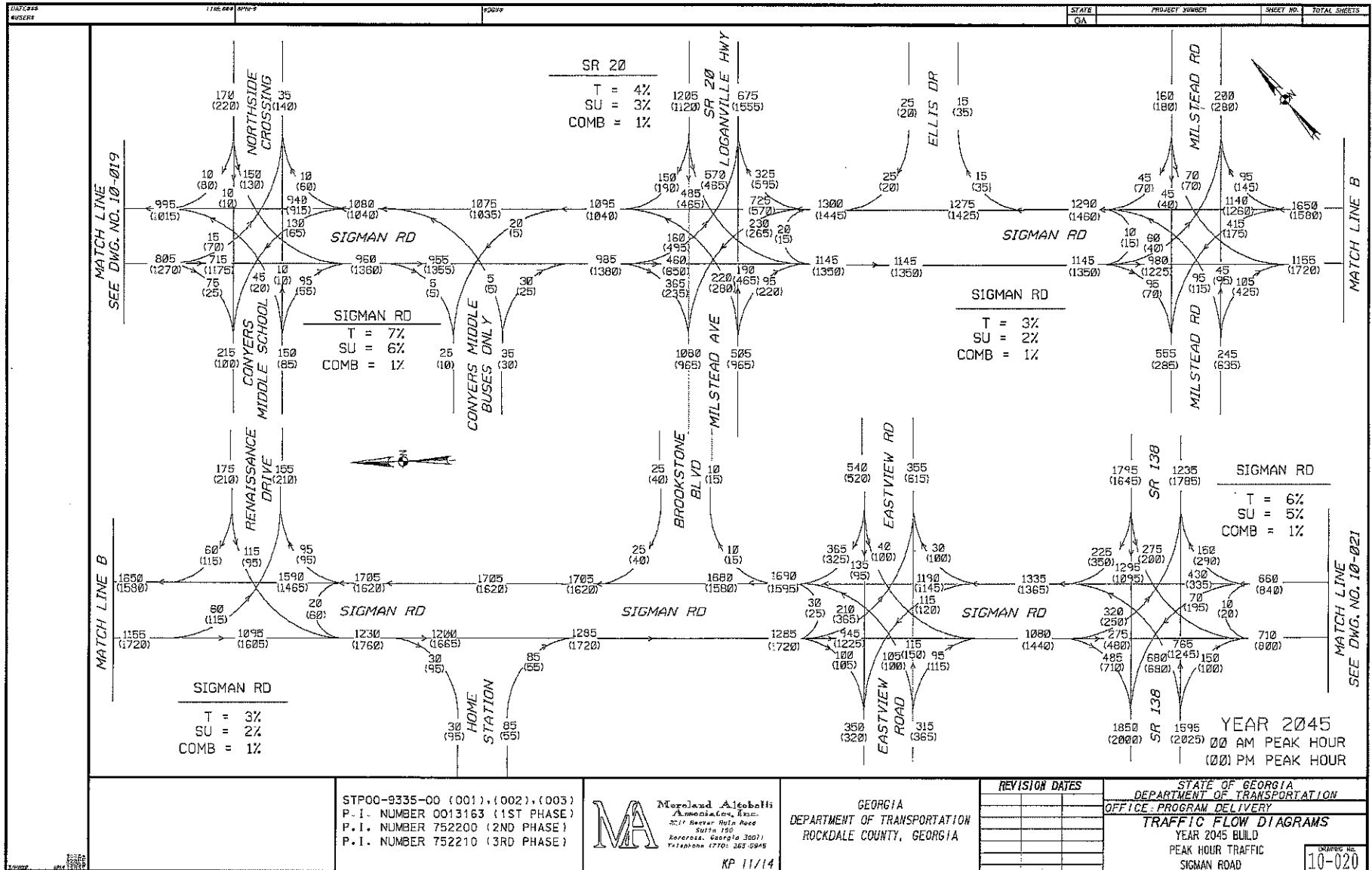


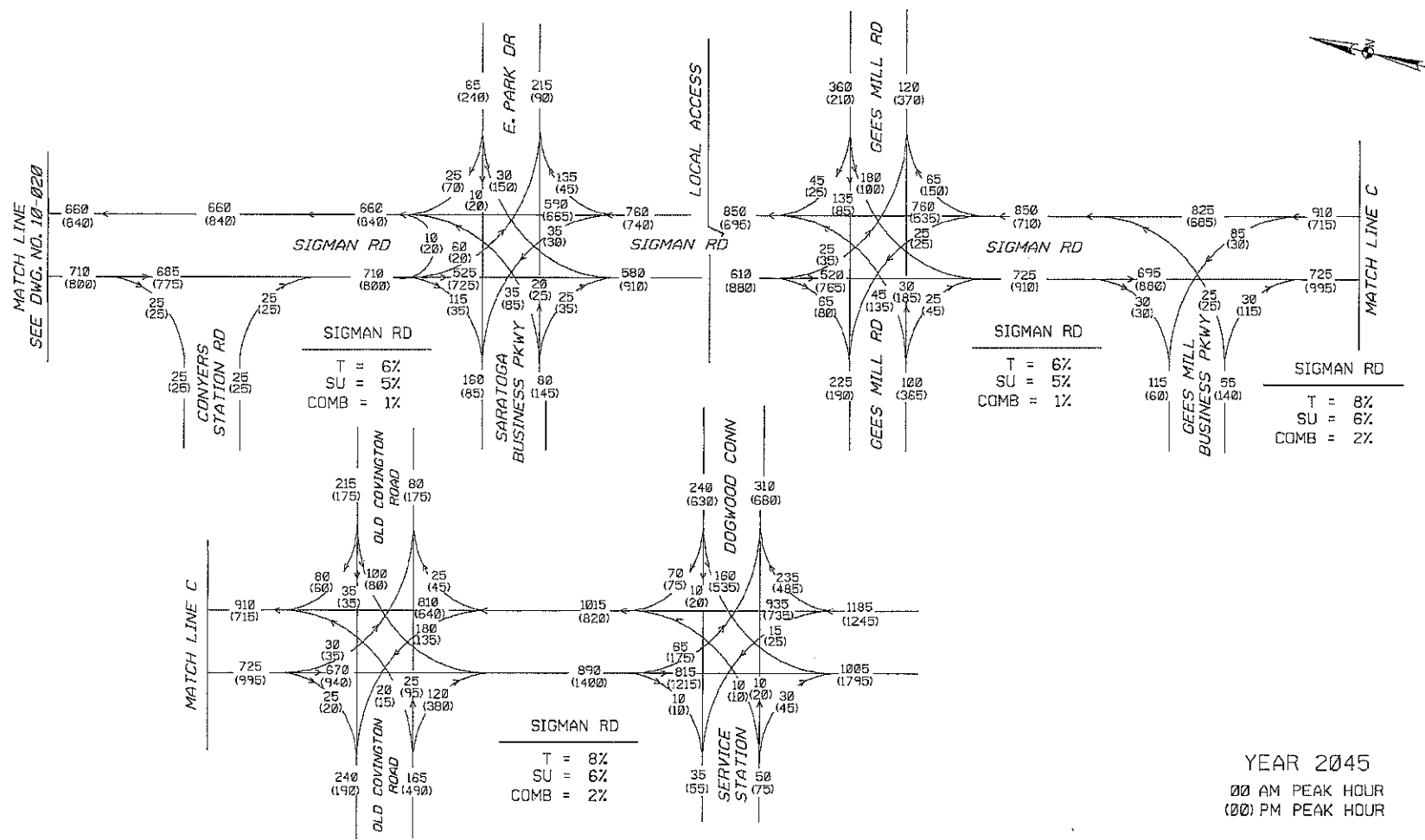
GEORGIA
DEPARTMENT OF TRANSPORTATION
ROCKDALE COUNTY, GEORGIA

REVISION	DATE	DESCRIPTION

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
YEAR 2045 BUILD
PEAK HOUR TRAFFIC
SIGMAN ROAD

DRAWING NO. 10-019





STP00-9335-00 (001),(002),(003)
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 P.I. NUMBER 752200 (2ND PHASE)
 P.I. NUMBER 752210 (3RD PHASE)

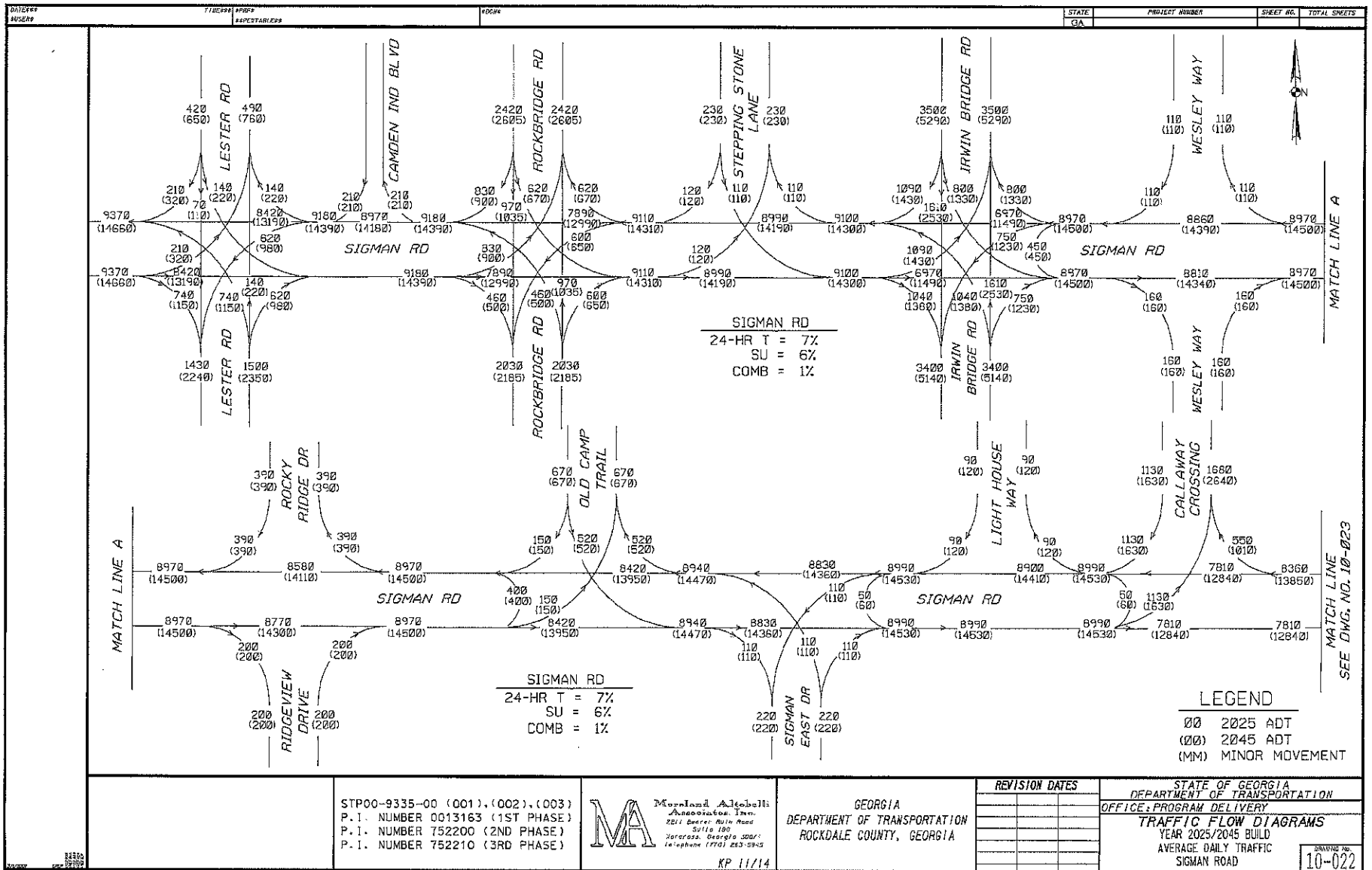
MA Maryland Alschell
 Associates, Inc.
 2011 Newer State Road
 Suite 100
 Marietta, Georgia 30067
 Telephone 770/263-9945

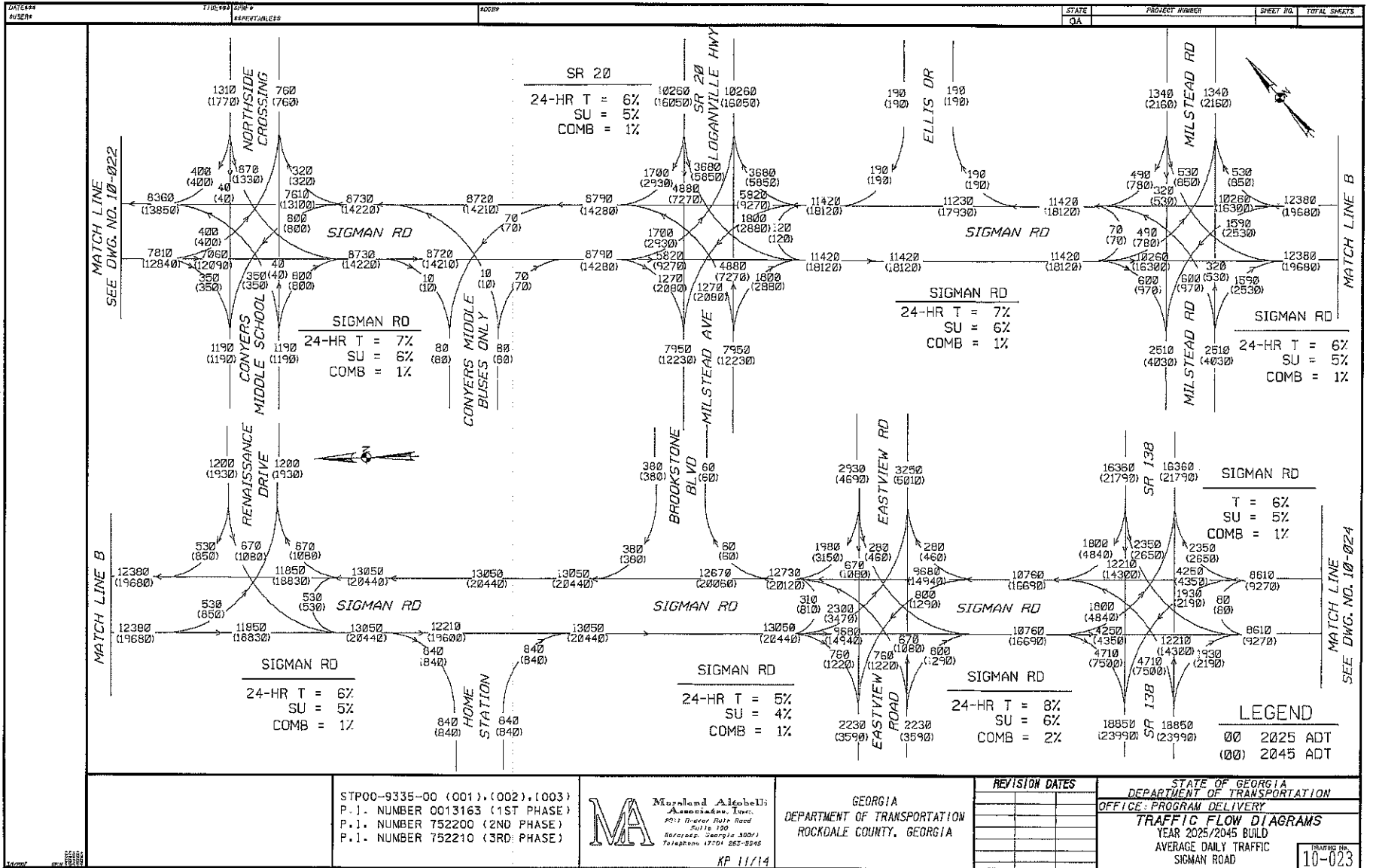
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 ROCKDALE COUNTY, GEORGIA

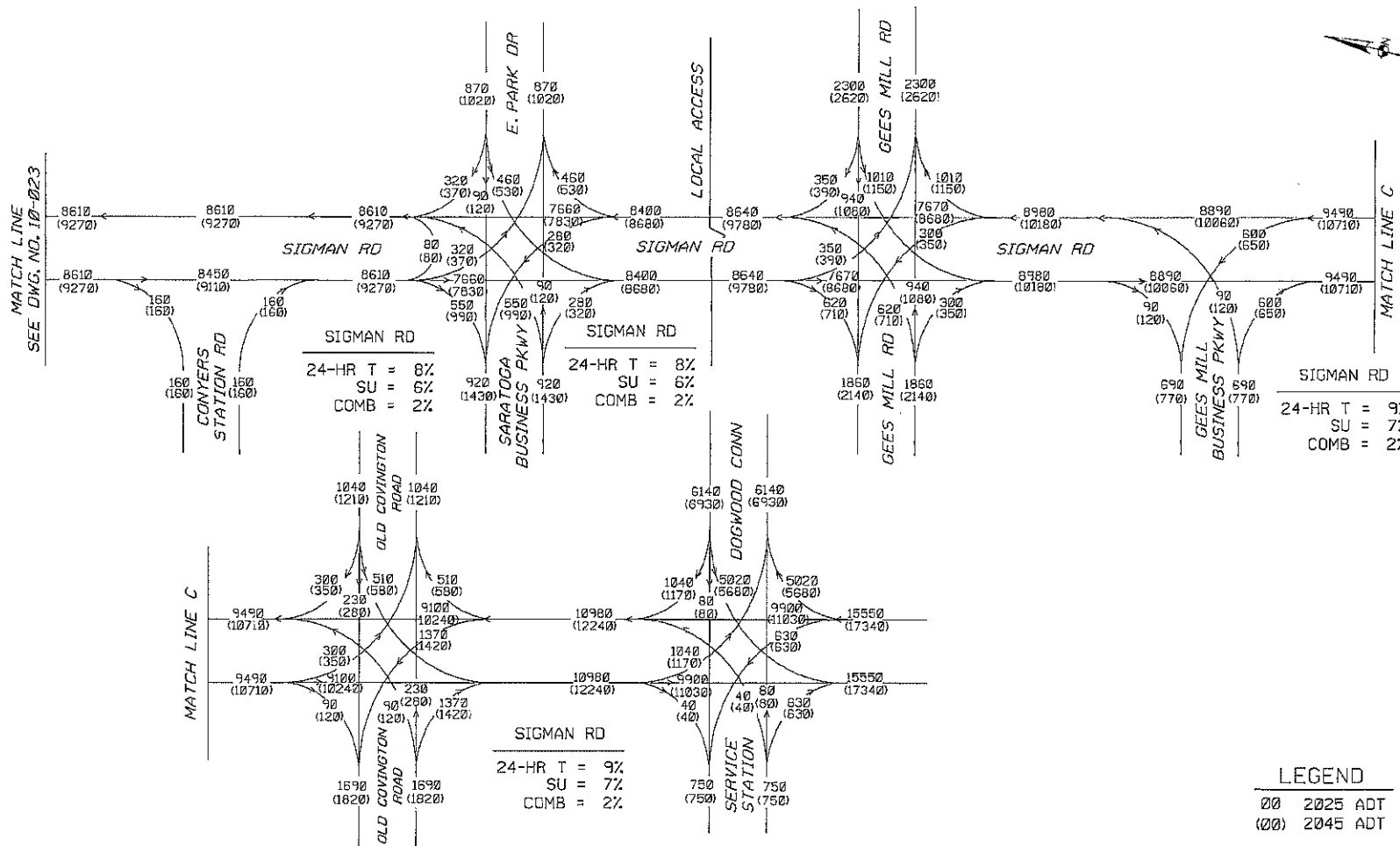
REVISION DATES	

STATE OF GEORGIA
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TRAFFIC FLOW DIAGRAMS
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 PEAK HOUR TRAFFIC
 SIGMAN ROAD

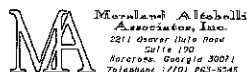
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STP00-9335-00 (001)-(002)-(003)
P.I. NUMBER 0013163 (1ST PHASE)
P.I. NUMBER 752200 (2ND PHASE)
P.I. NUMBER 752210 (3RD PHASE)



GEORGIA
DEPARTMENT OF TRANSPORTATION
ROCKDALE COUNTY, GEORGIA

REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC FLOW DIAGRAMS
YEAR 2025/2045 BUILD
AVERAGE DAILY TRAFFIC
SIGMAN ROAD

10-024

Attachment 6

Capacity Analysis Summary

LOS Analysis for Intersections on the Project Corridor¹

Intersection ²	Year 2012		Opening Year 2025				Design Year 2045			
	Existing		No-Build		Build		No-Build		Build	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Lester Road	A	A	A	A	A	A	A	B	A	B
Rockbridge Road	A	B	B	B	A	B	B	E	A	B
Irwin Bridge Road	A	A	A	A	B	B	B	C	B	B
Callaway Crossing	B	C	C	D	B	A	F	F	B	B
Conyers Middle School	A	A	A	A	B	B	A	B	B	B
SR 20/Loganville Hwy	B	B	B	C	C	C	C	D	C	D
Milstead Road	B	A	B	B	A	A	D	D	B	C
Renaissance Drive*	E	F	F	F	F(B)*	F(B)*	F	F	B	B
Eastview Road	A	A	B	A	B	B	D	E	C	C
SR 138	C	C	C	C	C	C	F	D	D	D
E. Park Drive/ Sarasota Business Pkwy	A	B	A	B	A	B	A	B	A	B
Gees Mill Road	B	C	B	B	B	B	B	B	B	B
Gees Mill Business Pkwy	C	C	C	C	C	C	D	D	D	C
Old Covington Road	A	B	B	B	A	B	B	C	B	B
Dogwood Connector	B	B	B	B	B	C	B	C	B	C

¹Analysis used Synchro 8 Software, which uses HCM methodology.

²Signalized intersections are indicated by bold typeface. All other intersections are stop-controlled. LOS for un-signalized intersections is for the stop-controlled (side street) movement. LOS for signalized intersections is the weighted average of all movements

*Renaissance Drive may require traffic signals. LOS with traffic signals shown in parenthesis.

Attachment 7
Concept Hydrology Study for
MS4 Requirements

MS4 Requirements – Concept Level
Sigman Road Widening Project
PI Nos. 0013163, 752200 & 752210, Rockdale County

Blue line streams from USGS topographic maps and county GIS and minor streams located by the Moreland Ecology Department are shown on the concept plan.

Wetland areas are shown on the concept plan. NWI locations are shown and have been field verified by the Moreland Ecology Department.

Area 1 Station 1117+00 Left

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the beginning of the project to the existing 42" culvert near 1117+30.

This area will be treated with a wet detention pond.

New Impervious Area	1.87	Acres
WQv=	0.187	acre-ft
WQv=	8146	Cubic Ft
Permanent Poolv=	4073	Cubic Ft
CPv=	24438	Cubic Ft
25-year detention	12219	Cubic Ft
Total Volume	36657	Cubic Ft
Length	96	Ft
Width	64	Ft
Depth	6	Ft

Area 2 Station 1117+00 Right

The widening of Sigman Road occurs on the right side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the beginning of the project to the existing 42" culvert near 1117+30.

This area will be treated with a wet detention pond.

New Impervious Area	0.90	Acres
WQv=	0.09	acre-ft
WQv=	3920	Cubic Ft
Permanent Poolv=	1960	Cubic Ft
CPv=	11760	Cubic Ft
25-year detention	5880	Cubic Ft
Total Volume	17640	Cubic Ft
Length	68	ft
Width	45	ft
Depth	6	ft

Area 3 Station 1118+00 Left

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the existing 42" culvert near station 1117+30 to the high point near station 1120+00.

This area will be treated with an enhanced swale.

New Impervious Area	0.29	Acres
WQv=	0.029	acre-ft
WQv=	1263	Cubic Ft
CPv=	3789	Cubic Ft
Total Volume	5052	Cubic Ft
Length	225	ft
Width	15	ft
Depth	1.5	ft

Area 4 Station 1118+00 Right

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the existing 42" culvert near station 1117+30 to the high point near station 1120+00.

This area will be treated with an enhanced swale.

New Impervious Area	0.11	Acres
WQv=	0.011	acre-ft
WQv=	479	Cubic Ft
CPv=	1437	Cubic Ft
Total Volume	1916	Cubic Ft
Length	175	ft
Width	8	ft
Depth	1.5	ft

Area 5 Station 1122+50 Left

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1120+00 to the 6x6 box culvert near station 1122+50.

This area will be treated with an enhanced swale.

New Impervious Area	0.27	Acres
WQv=	0.027	acre-ft
WQv=	1176	Cubic Ft
CPv=	3528	Cubic Ft
Total Volume	4704	Cubic Ft
Length	220	ft
Width	15	ft
Depth	1.5	ft

Area 6 Station 1122+00 Left

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1120+00 to the 6x6 box culvert near station 1122+50.

This area will be treated with an enhanced swale.

New Impervious Area	0.08	Acres
WQv=	0.008	acre-ft
WQv=	348	Cubic Ft
CPv=	1044	Cubic Ft
Total Volume	1392	Cubic Ft
Length	120	ft
Width	8	ft
Depth	1.5	ft

Area 7 Station 1122+50 Right

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway.

Due to the proximity of the existing buildings, no water quality facility can be constructed in this area.

Area 8 Station 1122+50 Left

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway.

Due to the proximity of the stream and the side road, no water quality facility can be constructed in this area.

Area 9 Station 1125+50 Left

The widening of Sigman Road occurs on the right side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1128+50 to the intersection near station 1125+00.

This area will be treated with an enhanced swale.

New Impervious Area	0.14	Acres
WQv=	0.014	acre-ft
WQv=	610	Cubic Ft
CPv=	1830	Cubic Ft
Total Volume	2440	Cubic Ft
Length	225	ft
Width	8	ft
Depth	1.5	ft

Area 10 Station 1125+50 Right

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway.

Due to the proximity of the electrical transmission line and the side road, no water quality facility can be constructed in this area.

Area 11 Station 1134+50 Left

The widening of Sigman Road occurs on the left side of the center line. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway.

Due to the historical property located in this drainage area, no water quality facility can be constructed in this area.

Area 12 Station 1134+50 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drains is from the high point near station 1128+50 to the 4'x6' box culvert near station 1134+50.

This area will be treated with a wet detention pond.

New Impervious Area	0.57	Acres
WQv=	0.057	acre-ft
WQv=	2483	Cubic Ft
Permanent Poolv=	1242	Cubic Ft
CPv=	7449	Cubic Ft
25-year detention	3724.5	Cubic Ft
Total Volume	11173.5	Cubic Ft
Length	54	ft
Width	36	ft
Depth	6	ft

Area 13 Station 1134+50 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the 4'x6' box culvert near station 1134+50 the high point near station 1147+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.65	Acres
WQv=	0.065	acre-ft
WQv=	2831	Cubic Ft
Permanent Poolv=	1416	Cubic Ft
CPv=	8493	Cubic Ft
25-year detention	4246.5	Cubic Ft
Total Volume	12739.5	Cubic Ft
Length	57	ft
Width	38	ft
Depth	6	ft

Area 14 Station 1134+50 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the 4'x6' box culvert near station 1134+50 the high point near station 1147+00.

This area will be treated with a wet detention pond.

New Impervious Area	1.19	Acres
WQv=	0.119	acre-ft
WQv=	5184	Cubic Ft
Permanent Poolv=	2592	Cubic Ft
CPv=	15552	Cubic Ft
25-year detention	7776	Cubic Ft
Total Volume	23328	Cubic Ft
Length	77	ft
Width	51	ft
Depth	6	ft

Area 15 Station 1151+25 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1147+00 to the 30" culvert near station 1151+25.

This area will be treated with a wet detention pond.

New Impervious Area	0.22	Acres
WQv=	0.022	acre-ft
WQv=	958	Cubic Ft
Permanent Poolv=	479	Cubic Ft
CPv=	2874	Cubic Ft
25-year detention	1437	Cubic Ft
Total Volume	4311	Cubic Ft
Length	33	ft
Width	22	ft
Depth	6	ft

Area 16 Station 1151+25 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1147+00 to the 30" culvert near station 1151+25.

Due to the proximity of the existing buildings, no water quality facility can be constructed in this area.

Area 17 Station 1151+50 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the 30" culvert near station 1151+25 to the high point near station 1160+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.45	Acres
WQv=	0.045	acre-ft
WQv=	1960	Cubic Ft
Permanent Poolv=	980	Cubic Ft
CPv=	5880	Cubic Ft
25-year detention	2940	Cubic Ft
Total Volume	8820	Cubic Ft
Length	48	ft
Width	32	ft
Depth	6	ft

Area 18 Station 1151+50 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the 30" culvert near station 1151+25 to the high point near station 1160+00.

During the design phase, consideration should be given to the prospect of acquiring detention pond #1 and expanding its foot print to provide water quality treatment in this area.

This area will be treated with a wet detention pond.

New Impervious Area	0.83	Acres
WQv=	0.083	acre-ft
WQv=	3615	Cubic Ft
Permanent Poolv=	1808	Cubic Ft
CPv=	10845	Cubic Ft
25-year detention	5422.5	Cubic Ft
Total Volume	16267.5	Cubic Ft
Length	65	ft
Width	43	ft
Depth	6	ft

Area 19 Station 1180+00 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1160+00 to the 5x5 box culvert near station 1191+75. Due to the proximity of the stream to the roadway the water quality facility will have to be located near station 1180+00 and the area from 1180+00 to 1191+75 will not be treated.

This area will be treated with a wet detention pond.

New Impervious Area	1.91	Acres
WQv=	0.191	acre-ft
WQv=	8320	Cubic Ft
Permanent Poolv=	4160	Cubic Ft
CPv=	24960	Cubic Ft
25-year detention	12480	Cubic Ft
Total Volume	37440	Cubic Ft
Length	98	ft
Width	65	ft
Depth	6	ft

Area 20 Station 1191+75 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1160+00 to the high point near station 1202+00.

Due to the high density residential and commercial development in this area, no area is available for the treatment facility to be constructed. This area will not be treated.

Area 21 Station 1191+75 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the 5x5 box culvert near station 1191+75 to the high point near station 1202+00.

Due to the high density residential and commercial development in this area, no area is available for the treatment facility to be constructed. This area will not be treated.

Area 22 Station 1205+00 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1202+00 to the 66" culvert near station 1205+50.

This area will be treated with a wet detention pond.

New Impervious Area	0.18	Acres
WQv=	0.018	acre-ft
WQv=	784	Cubic Ft
Permanent Poolv=	392	Cubic Ft
CPv=	2352	Cubic Ft
25-year detention	1176	Cubic Ft
Total Volume	3528	Cubic Ft
Length	30	ft
Width	20	ft
Depth	6	ft

Area 23 Station 1205+50 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1226+00 to the 66" culvert near station 1205+50.

This area will be treated with a wet detention pond.

New Impervious Area	1.06	Acres
WQv=	0.106	acre-ft
WQv=	4617	Cubic Ft
Permanent Poolv=	2309	Cubic Ft
CPv=	13851	Cubic Ft
25-year detention	6925.5	Cubic Ft
Total Volume	20776.5	Cubic Ft
Length	74	ft
Width	49	ft
Depth	6	ft

Area 24 Station 1205+00 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1202+00 to the 66" culvert near station 1205+50.

This area will be treated with a wet detention pond.

New Impervious Area	0.33	Acres
WQv=	0.033	acre-ft
WQv=	1437	Cubic Ft
Permanent Poolv=	719	Cubic Ft
CPv=	4311	Cubic Ft
25-year detention	2155.5	Cubic Ft
Total Volume	6466.5	Cubic Ft
Length	41	ft
Width	27	ft
Depth	6	ft

Area 25 Station 1205+50 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1226+00 to the 66" culvert near station 1205+50.

This area will be treated with a wet detention pond.

New Impervious Area	1.95	Acres
WQv=	0.195	acre-ft
WQv=	8494	Cubic Ft
Permanent Poolv=	4247	Cubic Ft
CPv=	25482	Cubic Ft
25-year detention	12741	Cubic Ft
Total Volume	38223	Cubic Ft
Length	99	ft
Width	66	ft
Depth	6	ft

Area 26 Station 1239+00 Right

The widening of Sigman Road is minimal in this area. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1226+00 to the 36" culvert near station 1240+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.16	Acres
WQv=	0.016	acre-ft
WQv=	697	Cubic Ft
Permanent Poolv=	349	Cubic Ft
CPv=	2091	Cubic Ft
25-year detention	1045.5	Cubic Ft
Total Volume	3136.5	Cubic Ft
Length	29	Ft
Width	19	Ft
Depth	6	Ft

Area 27 Station 1240+50 Left

The widening of Sigman Road is minimal in this area. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1226+00 to the 36" culvert near station 1240+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.67	Acres
WQv=	0.067	acre-ft
WQv=	2919	Cubic Ft
Permanent Poolv=	1460	Cubic Ft
CPv=	8757	Cubic Ft
25-year detention	4378.5	Cubic Ft
Total Volume	13135.5	Cubic Ft
Length	59	ft
Width	39	ft
Depth	6	ft

Area 28 Station 1239+00 Right

The widening of Sigman Road occurs on the right side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1251+00 to the 36" culvert near station 1240+00.

This area will be treated with a wet detention pond.

New Impervious Area	1.05	Acres
WQv=	0.105	acre-ft
WQv=	4574	Cubic Ft
Permanent Poolv=	2287	Cubic Ft
CPv=	13722	Cubic Ft
25-year detention	6861	Cubic Ft
Total Volume	20583	Cubic Ft
Length	72	ft
Width	48	ft
Depth	6	ft

Area 29 Station 1240+50 Left

The widening of Sigman Road occurs on the right side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1251+00 to the 36" culvert near station 1240+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.57	Acres
WQv=	0.057	acre-ft
WQv=	2483	Cubic Ft
Permanent Poolv=	1242	Cubic Ft
CPv=	7449	Cubic Ft
25-year detention	3724.5	Cubic Ft
Total Volume	11173.5	Cubic Ft
Length	54	ft
Width	36	ft
Depth	6	ft

Area 30 Station 1269+00 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1251+00 to the 6x8 double box culvert near station 1269+00.

This area will be treated with a wet detention pond.

New Impervious Area	1.71	Acres
WQv=	0.171	acre-ft
WQv=	7449	Cubic Ft
Permanent Poolv=	3725	Cubic Ft
CPv=	22347	Cubic Ft
25-year detention	11173.5	Cubic Ft
Total Volume	33520.5	Cubic Ft
Length	93	ft
Width	62	ft
Depth	6	ft

Area 31 Station 1269+00 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1251+00 to the 6x8 double box culvert near station 1269+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.93	Acres
WQv=	0.093	acre-ft
WQv=	4051	Cubic Ft
Permanent Poolv=	2026	Cubic Ft
CPv=	12153	Cubic Ft
25-year detention	6076.5	Cubic Ft
Total Volume	18229.5	Cubic Ft
Length	68	ft
Width	45	ft
Depth	6	ft

Area 32 Station 1269+00 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1289+00 to the 6x8 double box culvert near station 1269+00.

This area will be treated with a wet detention pond.

New Impervious Area	1.03	Acres
WQv=	0.103	acre-ft
WQv=	4487	Cubic Ft
Permanent Poolv=	2244	Cubic Ft
CPv=	13461	Cubic Ft
25-year detention	6730.5	Cubic Ft
Total Volume	20191.5	Cubic Ft
Length	72	ft
Width	48	ft
Depth	6	ft

Area 33 Station 1269+00 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1289+00 to the 6x8 double box culvert near station 1269+00.

This area will be treated with a wet detention pond.

New Impervious Area	1.91	Acres
WQv=	0.191	acre-ft
WQv=	8320	Cubic Ft
Permanent Poolv=	4160	Cubic Ft
CPv=	24960	Cubic Ft
25-year detention	12480	Cubic Ft
Total Volume	37440	Cubic Ft
Length	98	ft
Width	65	ft
Depth	6	ft

Area 34 Station 1293+00 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1289+00 to the 60" culvert near station 1293+00.

This area will be treated with an enhanced swale.

New Impervious Area	0.38	Acres
WQv=	0.038	acre-ft
WQv=	1655	Cubic Ft
CPv=	4965	Cubic Ft
Total Volume	6620	Cubic Ft
Length	325	ft
Width	14	ft
Depth	1.5	ft

Area 35 Station 1293+00 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1289+00 to the 60" culvert near station 1293+00.

This area will be treated with an enhanced swale.

New Impervious Area	0.21	Acres
WQv=	0.021	acre-ft
WQv=	915	Cubic Ft
CPv=	2745	Cubic Ft
Total Volume	3660	Cubic Ft
Length	300	ft
Width	8	ft
Depth	1.5	ft

Area 36 Station 1293+00 Right

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1303+00 to the 60" culvert near station 1293+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.95	Acres
WQv=	0.095	acre-ft
WQv=	4138	Cubic Ft
Permanent Poolv=	2069	Cubic Ft
CPv=	12414	Cubic Ft
25-year detention	6207	Cubic Ft
Total Volume	18621	Cubic Ft
Length	69	ft
Width	46	ft
Depth	6	ft

Area 37 Station 1293+00 Left

The widening of Sigman Road occurs on the left side of the center line. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1303+00 to the 60" culvert near station 1293+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.52	Acres
WQv=	0.052	acre-ft
WQv=	2265	Cubic Ft
Permanent Poolv=	1133	Cubic Ft
CPv=	6795	Cubic Ft
25-year detention	3397.5	Cubic Ft
Total Volume	10192.5	Cubic Ft
Length	51	ft
Width	34	ft
Depth	6	ft

Area 38 Station 1318+50 Right

The widening of Sigman Road occurs symmetrically. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1303+00 to the 4x6 box culvert near station 1318+50.

This area will be treated with a wet detention pond.

New Impervious Area	0.37	Acres
WQv=	0.037	acre-ft
WQv=	1612	Cubic Ft
Permanent Poolv=	806	Cubic Ft
CPv=	4836	Cubic Ft
25-year detention	2418	Cubic Ft
Total Volume	7254	Cubic Ft
Length	44	ft
Width	29	ft
Depth	6	ft

Area 39 Station 1318+50 Left

The widening of Sigman Road occurs symmetrically. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1303+00 to the 4x6 box culvert near station 1318+50.

This area will not be treated. Insufficient room to construct a water quality structure is present between the outfall and an existing commercial/industrial building.

Area 40 Station 1318+50 Right

The widening of Sigman Road occurs symmetrically. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1340+00 to the 4x6 box culvert near station 1318+50.

This area will be treated with a wet detention pond.

New Impervious Area	1.46	Acres
WQv=	0.146	acre-ft
WQv=	6360	Cubic Ft
Permanent Poolv=	3180	Cubic Ft
CPv=	19080	Cubic Ft
25-year detention	9540	Cubic Ft
Total Volume	28620	Cubic Ft
Length	86	ft
Width	57	ft
Depth	6	ft

Area 41 Station 1318+50 Left

The widening of Sigman Road occurs symmetrically. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1340+00 to the 4x6 box culvert near station 1318+50.

This area will be treated with a wet detention pond.

New Impervious Area	1.70	Acres
WQv=	0.17	acre-ft
WQv=	7405	Cubic Ft
Permanent Poolv=	3703	Cubic Ft
CPv=	22215	Cubic Ft
25-year detention	11107.5	Cubic Ft
Total Volume	33322.5	Cubic Ft
Length	92	ft
Width	61	ft
Depth	6	ft

Area 42 Station 1354+50 Right

The widening of Sigman Road occurs to the left of the centerline. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1340+00 to the 4x6 box culvert near station 1354+50.

This area will be treated with a wet detention pond.

New Impervious Area	1.38	Acres
WQv=	0.138	acre-ft
WQv=	6011	Cubic Ft
Permanent Poolv=	3006	Cubic Ft
CPv=	18033	Cubic Ft
25-year detention	9016.5	Cubic Ft
Total Volume	27049.5	Cubic Ft
Length	83	ft
Width	55	ft
Depth	6	ft

Area 43 Station 1354+50 Left

The widening of Sigman Road occurs to the left of the centerline. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1340+00 to the 4x6 box culvert near station 1354+50.

This area will be treated with a wet detention pond.

New Impervious Area	0.75	Acres
WQv=	0.075	acre-ft
WQv=	3267	Cubic Ft
Permanent Poolv=	1634	Cubic Ft
CPv=	9801	Cubic Ft
25-year detention	4900.5	Cubic Ft
Total Volume	14701.5	Cubic Ft
Length	62	ft
Width	41	ft
Depth	6	ft

Area 44 Station 1354+50 to Station 1361+00 Left and Right

This area is located between two culvert crossing and streams. Due to the location of the streams and an existing commercial/industrial building no water quality structures can be constructed in this area.

Area 45 Station 1361+00 Right

The widening of Sigman Road occurs to the left of the centerline. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1388+00 to the 60" culvert near station 1361+00.

This area will be treated with a wet detention pond.

New Impervious Area	2.57	Acres
WQv=	0.257	acre-ft
WQv=	11195	Cubic Ft
Permanent Poolv=	5598	Cubic Ft
CPv=	33585	Cubic Ft
25-year detention	16792.5	Cubic Ft
Total Volume	50377.5	Cubic Ft
Length	114	ft
Width	76	ft
Depth	6	ft

Area 46 Station 1364+00 Left

The widening of Sigman Road occurs to the left of the centerline. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1388+00 to the 72" culvert near station 1364+00.

This area will be treated with a wet detention pond.

New Impervious Area	1.24	Acres
WQv=	0.124	acre-ft
WQv=	5401	Cubic Ft
Permanent Poolv=	2701	Cubic Ft
CPv=	16203	Cubic Ft
25-year detention	8101.5	Cubic Ft
Total Volume	24304.5	Cubic Ft
Length	80	ft
Width	53	ft
Depth	6	ft

Area 47 Station 1405+00 Right

The widening of Sigman Road occurs to the left of the centerline. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1388+00 to the 72" culvert near station 1405+00.

This area will be treated with a wet detention pond.

New Impervious Area	1.62	Acres
WQv=	0.162	acre-ft
WQv=	7057	Cubic Ft
Permanent Poolv=	3529	Cubic Ft
CPv=	21171	Cubic Ft
25-year detention	10585.5	Cubic Ft
Total Volume	31756.5	Cubic Ft
Length	90	ft
Width	60	ft
Depth	6	ft

Area 48 Station 1405+00 Left

The widening of Sigman Road occurs to the left of the centerline. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1388+00 to the 72" culvert near station 1405+00.

This area will be treated with a wet detention pond.

New Impervious Area	0.88	Acres
WQv=	0.088	acre-ft
WQv=	3833	Cubic Ft
Permanent Poolv=	1917	Cubic Ft
CPv=	11499	Cubic Ft
25-year detention	5749.5	Cubic Ft
Total Volume	17248.5	Cubic Ft
Length	66	ft
Width	44	ft
Depth	6	ft

Area 49 Station 1405+00 Right

The widening of Sigman Road occurs to the left of the centerline. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1430+00 to the 72" culvert near station 1405+00.

This area will be treated with a wet detention pond.

New Impervious Area	2.38	Acres
WQv=	0.238	acre-ft
WQv=	10367	Cubic Ft
Permanent Poolv=	5184	Cubic Ft
CPv=	31101	Cubic Ft
25-year detention	15550.5	Cubic Ft
Total Volume	46651.5	Cubic Ft
Length	110	ft
Width	73	ft
Depth	6	ft

Area 50 Station 1405+00 Left

The widening of Sigman Road occurs to the left of the centerline. Water Quality treatment is provided for new impervious areas. Due to topography it is assumed that no cross drain pipes would be able to shift water from the left to the right side of the roadway. The area drained is from the high point near station 1430+00 to the 72" culvert near station 1405+00.

This area will be treated with a wet detention pond.

New Impervious Area	1.29	Acres
WQv=	0.129	acre-ft
WQv=	5619	Cubic Ft
Permanent Poolv=	2810	Cubic Ft
CPv=	16857	Cubic Ft
25-year detention	8428.5	Cubic Ft
Total Volume	25285.5	Cubic Ft
Length	81	ft
Width	54	ft
Depth	6	ft

Attachment 8

Pavement Studies

Flexible Pavement Design Analysis

PI Number	0752190	County(s)	Rockdale
Project Number	STP00-9335-00(001)	Design Name	Concept - Full Depth Flex Pvmnt Design #1
Project Description	Sigman Rd. Widening & Improvements - from Lester Rd. to Dogwood Conn.		

Traffic Data (AADTs are one-way)						Miscellaneous Data	
Initial Design Year	2025	Initial AADT, VPD	9,670	24 Hour Truck %	9.00	Lanes in one direction	2
Final Design Year	2045	Final AADT, VPD	10,870	SU Truck %	7.00	Curb & Gutter/Barrier	Yes
		Mean AADT, VPD	10,270	MU Truck %	2.00		

Design Data					
Lane Distribution Factor (%)	70.00	Soil Support Value	2.50	Single Unit ESAL	0.40
Terminal Serviceability Index	2.50	Regional Factor	1.60	Multiple Unit ESAL	1.50
		User Defined 18-KIP ESAL	0.00	Calculated 18-KIP ESAL	0.64
Non-Standard Value Comment					

Design Loading (Calculated 18-KIP ESAL)					
Mean AADT, VPD	LDF (%)	Vehicle Type	Volume (%)	ESAL Factor	Daily ESAL
10,270	70.00	Single Unit Truck	7.00	0.40	202
		Multi Unit Truck	2.00	1.50	216
Total Daily ESALs					418
Total Design Period ESALs					3,051,400

Proposed Flexible Full Depth Pavement Structure				
Course	Material	Thickness (inches)	Structural Coefficient	Structural Value
Course 1	12.5 mm Superpave	1.50	0.4400	0.66
Course 2	19 mm Superpave	2.00	0.4400	0.88
Course 3	25 mm Superpave	1.00	0.4400	0.44
		3.00	0.3000	0.90
Course 4	Graded Aggregate Base	12.00	0.1600	1.92
Required SN	5.32	Proposed pavement is 9.85% Underdesigned		Proposed SN 4.80

Design Remarks	The data above represents the critical section of Sigman Rd. with the maximum design period ESAL which occurs between Old Covington Hwy. and Dogwood Connector.
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Prepared By	Will Sheehan, PE, Consultant PM	12/10/2013 10:22 AM	Date
Recommended By	Consultant Design Phase Leader		Date
Approved By	State Pavement Engineer		Date

Rigid Pavement Design Analysis

PI Number	0752190	County(s)	Rockdale
Project Number	STP00-9335-00(001)	Design Name	Concept - Full Depth Rigid Pvmnt Dsgn #1
Project Description	Sigman Rd. Widening & Improvements - from Lester Rd. to Dogwood Conn.		
Section Location	Sigman Rd.	Type Section	JPCP
Begin Section Station	1100+00	End Section Station	1430+30
		Section Length	6.26 mi.

Traffic Data (AADTs are one-way)						Miscellaneous Data	
Initial Design Year	2025	Initial AADT, VPD	9,670	24 Hour Truck %	9.00	Lanes in one direction	2
Final Design Year	2045	Final AADT, VPD	10,870	SU Truck %	7.00	Curb & Gutter/Barrier	Yes
		Mean AADT, VPD	10,270	MU Truck %	2.00	Interstate	No

Design Loading (Calculated 18-KIP ESAL)					
Mean AADT, VPD	LDF (%)	Vehicle Type	Volume (%)	ESAL Factor	Daily ESAL
10,270	70	Other Vehicles	91.00	0.004	27
		Single Unit Truck	7.00	0.500	252
		Multi Unit Truck	2.00	2.680	386
Total Daily ESALs					665
Total Design Period ESALs					4,854,500

Design Data										
Terminal Serviceability Index (P _t)		2.50	Working Stress (psi)		450	Modulus of Elasticity (psi)		3,200,000		
Soil Support Value	2.50	Subgrade Modulus (k)		130	Subbase Modulus (k ₁)		195	Subbase Modulus (k _{eff})		195
Trial Depth of PCC Pavement (inches)				9.50	Calculated Stress from Equation (psi)				410.15	
% Understressed		8.85	% Overdesigned			9.72	Balanced Thickness (inches)		9.02	
Non-Standard Value Comment										

Proposed Rigid Pavement Structure	
Material	Thickness (inches)
JPCP - Jointed Portland Cement Concrete Pavement	9.50
19 mm Superpave Asphaltic Concrete Interlayer	0.00
Graded Aggregate Base	10.00

JPCP - Dowel Bar Size and Spacing
Refer to GDOT Standard 5046H: Joint Details for Portland Cement Concrete Paving

Design Remarks	The data above represents the critical section of Sigman Rd. with the maximum design period ESAL which occurs between Old Covington Hwy. and Dogwood Connector.
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Prepared By	Will Sheehan, PE, Consultant PM	12/10/2013 10:22 AM
Recommended By	Consultant Design Phase Leader	Date
Approved By	State Pavement Engineer	Date

Attachment 9

Conforming Plan's Network Schematics



Attachment 10

Minutes of Concept Meetings



Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road, Suite 190
Norcross, Georgia 30071
Phone: 770-263-5945 Fax: 770-263-0166

MEETING MINUTES

Project: Sigman Road Widening

Meeting: Kick-Off Meeting

Location: Rockdale County

Prepared By: BMH

Prepared On: August 23, 2012

Meeting Date	August 22, 2012
MA Project No.	
CC:	File

ATTENDEES	ORGANIZATION	E-mail
Brad Hale	Moreland Altobelli	bhale@maai.net
Miguel Valentin	Rockdale County DOT	miguel.valentin@rockdalecounty.org

The purpose of the meeting was to discuss the new contract

Items Discussed

- Wanted TIA funding for this project.
- Want concept for everything, then will do design from Lester to Irwin (Ph1)
- 2 intersections are ready to go to construction; not designed for widening (outside of Ph1)
 - Move forward or wait? County wants to move forward.
 - Would like to take a preliminary look and at least move strain poles to ultimate location
 - County will send us plans
- Want to consider bike path. Either lanes or multi-use path.
 - Bike path on all 3 segments
 - Park & Ride – Dogwood Connector
 - City's master plan includes bike path on Sigman
 - Part of Sigman is already on bike route.
 - Master plan has path along Covington Hwy
 - Want MA to make recommendation: bike lanes or multi-use path, need CST estimate
 - County will provide copy of city's master plan
- There is a culvert within the city's section that was a constraint (low point between Publix and Hospital)
- Section between 138 & Dogwood is on bad soil, significant fill; consider staging & replacing fill.
- County counted 18%-21% truck traffic at Sigman/ North Salem/ Old Covington. There is industry between 138 & Old Covington
- Salem/ 120 project did not meet "logical termini"
 - FHWA suggested extending into Sigman
 - County put job on hold
 - *This Project will draw traffic from 162. 162 could be 6-lanes.*
- Possible extension of bike path along Lester by others. County now looking at concept
- County only has 2-D GIS and aerial photography
- County will provide accident data



- **CONCEPT:** Aerial concept & report OK for deliverable.
- **Property Issues?** None that he knows of
- **Utility Issues?** There was an AT&T long lines at Sigman & Gees Mill Rd.
- Raised medians, sidewalks should be included
- County ok with 11' lanes but prefer 12'
- Phase 1 alone may have logical termini
 - Irwin Bridge is highest volume cross road
- 1 PIOH should be OK, but city may want another meeting.
 - 2-D display on aerial OK
- **CONCERN:** Meeting Construction schedule for Ph1 (FY2017)
 - BMH & County should kickoff preliminary design before CE approval
- County thinks they have most of the ROW they need for 4 lanes on Ph1
- May be a stream on north side
- Consider flush median in highly developed areas near 138 & hospital (the SR section of Sigman)
- With raised median – look at U-Turn openings.
- **Signals**
 - No new locations come to mind
 - Rockbridge, maybe, none in Ph1
 - Not wild about roundabouts
- **Email & Update Schedule**
- Need to send letters to Property owners



Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road, Suite 190
Norcross, Georgia 30071
Phone: 770-263-5945 Fax: 770-263-0166

MEETING MINUTES

Project:	Sigman Rd. Widening & Improvements
	PI #'s 752190, 752200, & 75220, Rockdale County
Meeting:	Concept Coordination Meeting
Location:	RDOT Conference Room
Prepared By:	Will Sheehan
Prepared On:	August 29, 2013

Meeting Date	8/28/13
MA Project No.	ROCK1203
CC:	File ROCK1203

ATTENDEES	ORGANIZATION	EMAIL
Miguel Valentin	Rockdale County DOT	miguel.valentin@rockdalecounty.org
Brad Hale	MAAI	bhale@maai.net
Will Sheehan	MAAI	wsheehan@maai.net

The purpose of this meeting was to discuss the concept alternatives for the Sigman Rd. Project in central Rockdale County. MA provided an overall, aerial display of Alternative 2 – the Preferred Concept – as a visual-aid. The key points of the meeting are summarized below.

- MA evaluated and presented two concept alternatives (and no-build scenario) as described below.

Alternative 1

This alternative consists of widening the road symmetrically, such that the proposed centerline matches the existing centerline. This alternative results in significant environmental impacts, particularly to streams and wetlands, that would require an Individual 404 Permit at the cost of additional time and expense.

Alternative 2

This alternative consists of asymmetrical widening where the proposed centerline is independent of the existing, allowing the roadway alignment to shift to avoid the significant stream and wetland impacts associated with Alternative 1. Alternative 2 is slightly more expensive than Alternative 1 due to the additional retaining walls that are necessary to reduce impacts; however, Alternative 2 would not require an Individual 404 Permit and is the Preferred Concept Alternative.

- Rockdale County (Miguel) agreed with MA that we should move forward with Alternative 2.
- At Old Camp Trail, the Alt 2 alignment for Sigman Rd. is shifted to the north to avoid a stream. This shift could potentially displace the two properties on the corners. MA will design the improvements to try to avoid the two displacements through the use of retaining walls, raising the roadway grade, or a combination thereof. Old Camp Trail has a steep 12% up-grade.
- MA provided copies of Project Need, Effectiveness, and Logical Termini Justification Form, Draft Concept Report (75% complete), and concept layout for Alternative 2. County would like for MA to go ahead and submit Logical Termini Justification Form and Traffic Study to GDOT for approval.
- The County has submitted schedule to GDOT. MA will contact Darrell Dejean, GDOT PM, to make sure baseline schedule has been set up in GDOT's system.
Darrell was contacted on 8-29-2013 and stated that baseline schedule would be approved in roughly one month (around first of October).
- County would like the three current phases to be named Phases 2, 3 & 4. The already-constructed portion from I-20 to Lester Rd. is considered Phase 1. Phase 2 would come next with R/W currently slated for FY 2015.



Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road, Suite 190
Norcross, Georgia 30071
Phone: 770-263-5945 Fax: 770-263-0166

MEETING MINUTES

- County requested fee estimate for Phase 2 engineering (Lester Rd. to Irwin Bridge Rd.). This work would begin in January according to our current schedule.
- County stated their preference for a CE document instead of a more-involved EA. The Phase 1 section from I-20 to Lester was done as a CE. MA stated that, based on previous experience, FHWA would require an EA for a project such as this, but that MA would move forward and push for a CE. The EA would add another year or so to the schedule. Most of that would be review time.
- There are three traffic signal projects along Sigman Rd. that are either already under or will soon be under construction. The locations are listed below.
 - At Sarasota Business Pkwy, existing two-way stop on cross-street to be upgraded to signal.
 - At Gees Mill Rd., existing four-way stop to be upgraded to traffic signal.
 - At Old Covington Hwy, existing traffic signal to be modified. County measured 18% truck traffic at this intersection.
- County indicated that there is shallow rock on west side of project and poor soil conditions/distressed pavement on the east side from SR 138 to I-20.
- There is an existing multi-use path on Irwin Bridge Rd. County wants connectivity to Park & Ride Lot on Lester Rd. that will be provided by the proposed 10' multi use path.
- There are a few new industrial developments under way on the east side around Gees Mill Rd.
- County mentioned possible use of bottom-less culverts. MA mentioned that single span bridges may be a comparable alternative to bottom-less culverts from an economical and environmental standpoint.
- MA described new MS4 Hydrology Study that is now required for GDOT Concept Reports. County asked that this work be included in Phase 1 fee estimate as contingency.
- County requested PowerPoint slides of the overall project and each phase.
- Phase 4 has high truck traffic. It is in industrial area.
- Miguel requested that he be copied on all project correspondence.

ACTION ITEMS

- MA to contact Darrell Dejean re: baseline schedule.
- MA to move forward with Alt 2.
- MA to submit traffic study to GDOT.
- MA to submit fee estimate for Phase 2 to County.

Minutes of Concept Team Meeting

**STP00-9335-00 (001), (002), (003), P.I. Nos. 0013163, 752200 & 752210
Rockdale County**

Sigman Road Widening from east of Lester Road to Dogwood Connector

May 6, 2015 at 2:00 PM
GDOT Conference Room 409

ATTENDEES	ORGANIZATION	PHONE	EMAIL
Xavier James	GDOT Project Manager	404-631-1587	xjames@dot.ga.gov
Shun L Pringle	GDOT District 7	770-986-1414	springle@dot.ga.gov
Kim Phillips	GDOT Design Policy	404-631-1775	kiphillips@dot.ga.gov
Mac Cranford	GDOT District 7 Preconst.	770-986-1760	mcranford@dot.ga.gov
Quinton L. Spann	GDOT Planning	404-631-1646	qspann@dot.ga.gov
Matt Sanders	GDOT Engineering Services	404-631-1752	msanders@dot.ga.gov
Bobby Dollar	GDOT OES	404-631-1920	rdollar@dot.ga.gov
Keisha Jackson	GDOT OES	404-631-1160	kejackson@dot.ga.gov
Miguel Valentin	Rockdale County	770-278-7200	miguel.valentin@rockdalecounty.org
LN Manchi	MAAI	404-931-3792	lmanchi@maai.net
Karla Poshedly	MAAI	770-263-5945	kposhedly@maai.net

Mr. Xavier James identified the project and stated its description. He noted that right-of-way is anticipated to be scheduled for 2017 and construction in 2018.

Mr. LN Manchi then discussed the background and history of this project, the scheduling, the cost responsibilities, and the phasing of construction. He stated that project #0013163 is currently in the TIP for PE, ROW and construction with Xavier James as the GDOT project manager. Projects #752200 & 752210 have PE programmed in the TIP with local funding so that the environmental special studies and document could be reviewed by FHWA. Rockdale County plans to design and environmentally clear all three segments of the project and plans to let to contract each project as construction funds become available.

Ms. Karla Poshedly presented the concept layout, stating the need and purpose, project justification, typical section and other features of the project.

Questions and answers were made informally during Ms. Poshedly's presentation. Below are comments that were made during the concept team meeting.

- Expand the Project Justification Statement to include some specifics of Average Daily Traffic Volumes (ADT's), Levels of Service (LOS's) and crash data on Page 3 of the concept report for both no-build and build scenarios. Also, mention economic development and growth in the area and identify points of interest, such as schools, parks, community center, emergency services etc.
- Change the standard and proposed design vehicle on Page 7 from WB 62 to WB 67 as the project is close to I-20.

- Off-site Detours Anticipated: check the box “undetermined” instead of “yes”. Off-site detours would be difficult because of the schools, emergency services, etc. If off-site detours are needed for this project, a detour meeting and report will be required. It was indicated by the attendees that the PIOH meeting is a good opportunity to discuss any detours that are known at the time.
- Check “yes” for median usage in the Design Variance table and place a note under the table explaining where and why a design variance will be needed. The second median opening at Conyers Middle school will be needed for school buses to circulate into and out of the school.
- Contact Paul Tanner in the GDOT Office of Transportation Data to determine if whether a temporary state route would be needed for construction on Sigman Road.
- Check information pertaining to GRTA Express Bus Services in the study area.
- Update traffic year in the pavement design.
- Add Williams/Transcontinental pipeline to the list of utility involvements.
- List the anticipated number of impacted parcels separately under each P.I. Number.
- Check “yes” for the box indicating the need for a CWA Section 404 Permit and indicate that the permit type would be NWP 14.
- Place the word “unknown” in the remarks for Buffer Variance.
- Check “no” for the box related to FEMA clarifying that there would be no FEMA coordination required for this project.
- Summarize the explanation of the projects in the TIP and RTP in a table format.
- State May 6, 2015 as the date of the Initial Concept Meeting and indicate that the minutes are attached.
- Add utility owners to the list of responsible parties for utility relocation.
- Change GDOT to Rockdale County as the responsible party for Letting to Contract.
- Change GDOT to Rockdale County as the responsible party for Construction Supervision.
- Change GDOT to Rockdale County as the responsible party for Environmental Mitigation.
- Change GDOT to Rockdale County as the responsible party for Construction Inspection & Materials Testing.
- Separate the project costs for each P.I. Number and show the 80/20 split for federal and local matching funds where applicable.
- It was mentioned that the PFA was not prepared as the project was scheduled to be a local let project.
- Verify that the utility costs only include the reimbursable costs.
- Modify the layout to include improvements on the side streets and the location of existing traffic signals. Traffic study to include this information.
- Evaluate the possibility of reducing the sidewalk and shoulder widths of the project and determine if it can be reduced to save costs and reduce right-of-way impacts.

Minutes of Concept Team Meeting

**P.I. Nos. 0013163, 0013594, 752210 & 0012886
Rockdale County**

Sigman Road Widening from east of Lester Road to Dogwood Connector

September 3, 2015 at 10:00 AM
GDOT Conference Room 405

ATTENDEES	ORGANIZATION	PHONE	EMAIL
Xavier James	GDOT Project Manager	404-631-1587	xjames@dot.ga.gov
Bobby Hilliard	GDOT	404-631-1122	bhilliard@dot.ga.gov
Kim Phillips	GDOT Design Policy	404-631-1775	kiphillips@dot.ga.gov
Zackary Adriaenssens	GDOT OES	404-631-1650	zadriaenssens@dot.ga.gov
Quinton L. Spann	GDOT Planning	404-631-1646	qspann@dot.ga.gov
Matt Sanders	GDOT Engineering Services	404-631-1752	msanders@dot.ga.gov
Perry Black	GDOT	404-631-1224	peblack@dot.ga.gov
Shun L. Pringle	GDOT District 7 Const.	404-631-1160	springle@dot.ga.gov
Jean Hee P. Barrett	ARC	404-463-3282	jbarrett@atlantaregional.com
Miguel Valentin	Rockdale County	770-278-7200	miguel.valentin@rockdalecounty.org
LN Manchi	MAAI	404-931-3792	lmanchi@maai.net
Brad Hale	MAAI	770-263-5945	bhale@maai.net
Karla Poshedly	MAAI	770-263-5945	kposhedly@maai.net

After introductions, Mr. Xavier James identified the project and stated its description. He noted that the right-of-way for P.I. No. 0013163 is anticipated to be scheduled for 2017 and construction in 2018.

Mr. LN Manchi discussed the changing of the P.I. Numbers to clarify the project description and funding. He discussed the limits of the multi-use path and explained that P.I. No. 0012886 would be used to fund the multi-use path from east of Lester Road to Irwin Bridge Road.

Mr. Miguel Valentin, Transportation Director for Rockdale County, offered the following introduction to the project. He stated that the project has been in the works for many years; starting in the 1990's and is a priority project for the County. The initial phase was built in the 1990's and the remaining phases have not advanced due to funding constraints. However, the County's goal is to deliver the entire project over time as funding becomes available.

Ms. Karla Poshedly then presented the project justification, other projects in the area, traffic projections, functional classification, design criteria, utilities and other features of the project. She also discussed intersection improvements other than the Sigman Road widening which included:

- double left-turn lanes from eastbound Sigman Road to northbound SR 20
- double left-turn lanes on southbound SR 20 to eastbound Sigman Road
- double left-turns on SR 138 northbound and southbound

Mr. Manchi then explained the environmental studies to date and the permits that would be required for this project.

Mr. Brad Hale discussed construction and possible detours. He said detours are not anticipated for this project. However, there are 10 culverts on this project that will need to be evaluated to determine whether these culverts would have sufficient capacity and would not be replaced. If replacement is required, then a detour plan would be prepared and presented to the public and implemented during construction.

Ms. Poshedly then discussed the cost estimates, alternatives that were considered and project layout.

Questions and answers were made informally during Ms. Poshedly's presentation. Below are comments that were made during the concept team meeting.

- Include lighting costs in the construction costs.
- Obtain a letter of support for lighting. Discuss with Walt Taylor of GDOT. Include letter in Attachments of the concept report.
- Show lighting on typical section.
- P.I. No. 0012886 will only include the cost of the concrete for the trail. ROW and grading will be part of the Sigman Road widening P.I. No. 0013163.
- Look at walls verses ROW for cost savings when designing the multi-use path.
- Break out the cost estimate of the multi-use path in the Summary of Cost table on Page 14.
- Label the multi-use path on the typical section.
- Change P.I. No. on ROW table on Page 10.
- Show \$0 ROW for P.I. No. 0013163 on ROW table on Page 10.
- Revise text in construction section relating to detours on Page 13.
- Change P.I. No. in Cost Estimate Summary Table on Page 14.

There were no comments from GDOT Planning and Utilities Departments that attended.

Attachment 11

ARC TIP Sheets

FY 2014-2019 Transportation Improvement Program - Sorted by ARC Project Number

RO-206	SR 162 (SALEM ROAD) WIDENING	Jurisdiction Rockdale County	Existing	Planned	Length (mi.)	Network Year
0004434	FROM FLAT SHOALS ROAD IN ROCKDALE COUNTY TO OLD SALEM ROAD IN NEWTON COUNTY	Sponsor GDOT	2	4	1.9	2030
Programmed		Service Type Roadway / General Purpose Capacity	Analysis In the Region's Air Quality Conformity Analysis			

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
ROW		2018	STP - Statewide Flexible (GDOT)	\$12,347,367	\$3,086,842	\$0,000	\$0,000	\$15,434,209
CST		2019	STP - Statewide Flexible (GDOT)	\$9,226,894	\$2,306,723	\$0,000	\$0,000	\$11,533,617
				\$21,574,261	\$5,393,565	\$0,000	\$0,000	\$26,967,826

RO-229	SR 212 (SCOTT HIGHWAY) BRIDGE REPLACEMENT	Jurisdiction Rockdale County	Existing	Planned	Length (mi.)	Network Year
742980-	AT HONEY CREEK	Sponsor GDOT	2	2	0.8	2020
Programmed		Service Type Roadway / Bridge Upgrade	Analysis Exempt from Air Quality Analysis (40 CFR 93)			

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2002	STP - Statewide Flexible (GDOT)	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
PE	AUTH	2013	Bridge (On-System)	\$120,000	\$30,000	\$0,000	\$0,000	\$150,000
ROW	AUTH	2014	STP - Statewide Flexible (GDOT)	\$56,000	\$14,000	\$0,000	\$0,000	\$70,000
CST		2015	State Bridge Bonds (41602)	\$0,000	\$0,000	\$0,000	\$1,898,567	\$1,898,567
CST		2015	Bridge (On-System)	\$37,679	\$9,420	\$0,000	\$0,000	\$47,099
				\$213,679	\$53,420	\$0,000	\$1,898,567	\$2,165,666

RO-235C	SIGMAN ROAD WIDENING	Jurisdiction Rockdale County	Existing	Planned	Length (mi.)	Network Year
0013163	FROM EAST OF LESTER ROAD TO IRWIN BRIDGE ROAD	Sponsor Rockdale County	2	4	1.3	2020
Programmed		Service Type Roadway / General Purpose Capacity	Analysis In the Region's Air Quality Conformity Analysis			

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	1996	STP - Statewide Flexible (GDOT)	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
PE		2015	National Highway Performance Program (NHPP)	\$80,000	\$20,000	\$0,000	\$0,000	\$100,000
ROW		2018	Local Jurisdiction/Municipality Funds	\$0,000	\$0,000	\$1,156,000	\$0,000	\$1,156,000
CST		2019	National Highway Performance Program (NHPP)	\$4,410,933	\$1,102,733	\$0,000	\$0,000	\$5,513,666
				\$4,490,933	\$1,122,733	\$1,156,000	\$0,000	\$6,769,666

FY 2014-2019 Transportation Improvement Program - Sorted by ARC Project Number

RO-235D	SIGMAN ROAD WIDENING		Jurisdiction	Regional - East	Existing	Planned	Length (mi.)	Network Year
0013594	FROM IRWIN BRIDGE ROAD TO SR 138 (WALNUT GROVE ROAD) [ONLY PORTION FROM LOGANVILLE HIGHWAY TO SR 138 IS ON THE ARTERIAL PERIMETER]		Sponsor	GDOT	2	4	2.7	2030
Programmed			Service Type	Roadway / General Purpose Capacity	Analysis In the Region's Air Quality Conformity Analysis			
	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE		2019	Local Jurisdiction/Municipality Funds	\$0,000	\$0,000	\$500,000	\$0,000	\$500,000
ALL		LR 2020-2030	General Federal Aid 2020-2040	\$4,600,000	\$1,150,000	\$2,457,000	\$0,000	\$8,207,000
				\$4,600,000	\$1,150,000	\$2,957,000	\$0,000	\$8,707,000

RO-235E1	SIGMAN ROAD WIDENING		Jurisdiction	Rockdale County	Existing	Planned	Length (mi.)	Network Year
752210-	FROM SR 20/138 (WALNUT GROVE ROAD) TO OLD COVINGTON ROAD / DOGWOOD DRIVE		Sponsor	Rockdale County	2	4	2.7	2030
Programmed			Service Type	Roadway / General Purpose Capacity	Analysis In the Region's Air Quality Conformity Analysis			
	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE		2019	Local Jurisdiction/Municipality Funds	\$0,000	\$0,000	\$500,000	\$0,000	\$500,000
ALL		LR 2020-2030	General Federal Aid 2020-2040	\$5,348,800	\$1,215,600	\$2,092,600	\$0,000	\$8,657,000
				\$5,348,800	\$1,215,600	\$2,592,600	\$0,000	\$9,157,000

RO-237	KLONDIKE ROAD INTERSECTION IMPROVEMENTS		Jurisdiction	Rockdale County	Existing	Planned	Length (mi.)	Network Year
0006932	AT MCDANIEL MILL ROAD / HURST ROAD		Sponsor	Rockdale County	N/A	N/A	N/A	2020
Programmed			Service Type	Roadway / Operations & Safety	Analysis Exempt from Air Quality Analysis (40 CFR 93)			
	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2007	Local Jurisdiction/Municipality Funds	\$0,000	\$0,000	\$50,000	\$0,000	\$50,000
PE-OV	AUTH	2011	STP - Statewide Flexible (GDOT)	\$20,000	\$5,000	\$0,000	\$0,000	\$25,000
ROW	AUTH	2009	Local Jurisdiction/Municipality Funds	\$0,000	\$0,000	\$150,000	\$0,000	\$150,000
CST		2019	STP - Urban (>200K) (ARC)	\$1,924,800	\$0,000	\$481,200	\$0,000	\$2,406,000
				\$1,944,800	\$5,000	\$681,200	\$0,000	\$2,631,000

FY 2014-2019 Transportation Improvement Program - Sorted by ARC Project Number

RO-256	SIGMAN ROAD MULTI-USE TRAIL	Jurisdiction	Rockdale County	Existing	Planned	Length (mi.)	Network Year
0012886	FROM EAST OF LESTER ROAD TO IRWIN BRIDGE ROAD	Sponsor	Rockdale County	N/A	N/A	TBD	2020
Programmed		Service Type	Last Mile Connectivity / Joint Bike-Ped Facilities	Analysis Exempt from Air Quality Analysis (40 CFR 93)			

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2014	TAP - Urban (>200K) (ARC)	\$250,000	\$0,000	\$62,500	\$0,000	\$312,500
ROW		2017	Local Jurisdiction/Municipality Funds	\$0,000	\$0,000	\$200,000	\$0,000	\$200,000
CST		2018	Local Jurisdiction/Municipality Funds	\$0,000	\$0,000	\$2,000,000	\$0,000	\$2,000,000
				\$250,000	\$0,000	\$2,262,500	\$0,000	\$2,512,500

RO-257	SR 138 (MCDONOUGH HIGHWAY) SIGNAL UPGRADES	Jurisdiction	Rockdale County	Existing	Planned	Length (mi.)	Network Year
0012816	AT OLD MCDONOUGH ROAD AND OLD SALEM ROAD	Sponsor	GDOT	N/A	N/A	N/A	2020
Programmed		Service Type	Roadway / Operations & Safety	Analysis Exempt from Air Quality Analysis (40 CFR 93)			

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
PE	AUTH	2014	STP - Urban (>200K) (ARC)	\$50,000	\$0,000	\$0,000	\$0,000	\$50,000
ROW		2015	Congestion Mitigation & Air Quality Improvement (CMAQ)	\$80,000	\$20,000	\$0,000	\$0,000	\$100,000
CST		2017	Congestion Mitigation & Air Quality Improvement (CMAQ)	\$208,000	\$52,000	\$0,000	\$0,000	\$260,000
				\$338,000	\$72,000	\$0,000	\$0,000	\$410,000

RO-AR-138	I-20 EAST INTERCHANGE IMPROVEMENTS	Jurisdiction	Rockdale County	Existing	Planned	Length (mi.)	Network Year
731048-	AT SR 138/20 (WALNUT GROVE ROAD / MCDONOUGH HIGHWAY)	Sponsor	GDOT	4	6	N/A	2030
Programmed		Service Type	Roadway / Interchange Capacity	Analysis In the Region's Air Quality Conformity Analysis			

	Status	Year	Fund Type	Federal	State	Local	Bonds	Total
SCP	AUTH	2013	National Highway Performance Program (NHPP)	\$800,000	\$200,000	\$0,000	\$0,000	\$1,000,000
PE		2015	National Highway Performance Program (NHPP)	\$3,463,783	\$865,946	\$0,000	\$0,000	\$4,329,729
ROW		2017	National Highway Performance Program (NHPP)	\$24,969,600	\$6,242,400	\$0,000	\$0,000	\$31,212,000
CST		LR 2020-2030	General Federal Aid 2020-2040	\$8,499,200	\$2,124,800	\$0,000	\$0,000	\$10,624,000
				\$37,732,583	\$9,433,146	\$0,000	\$0,000	\$47,165,729